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Technology Evaluation Report: SITE Program Demonstration Test Soliditech, Inc. Solidification/Stabilization Process. Volume 2

PRC Environmental Management, Inc., Chicago, IL

Prepared for:

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16. ABSTRACT

The primary objective of the Soliditech, Inc. solidification/stabilization demonstration was to develop reliable performance and cost information. The demonstration took place at the Imperial Oil Company/Champion Chemical Company Superfund site in Morganville, New Jersey. Contamination at this site includes PCBs, various metals, and oil and grease. The Soliditech process mixes the waste material with Urrichem, a proprietary reagent; proprietary additives; pozzolanic materials or cement (cement was used for the demonstration); and water, in an open-topped concrete mixer.

The technical criteria used to evaluate the effectiveness of the Soliditech process were contaminant mobility, based upon leaching and permeability tests; and the structural integrity of the solidified material, based upon physical and morphological tests.

The treated wastes had significant structural integrity, low permeability, and higher bulk density than the untreated wastes. pH values of the treated wastes were highly influenced by alkalinity of the portland cement added during treatment. Treatment resulted in significantly reduced concentrations of arsenic, lead, and zinc in (1) extracts from TCLP, EP Toxicity, and BET procedures; and (2) leachates from intact cast cylinders subjected to ANS 16.1 and WILT procedures. PCBs could not be detected in any extracts or leachates from treated wastes.

17. KEY WORDS AND DOCUMENT ANALYSIS

Below on Process Sheet

a. DESCRIPTORS	b. IDENTIFIERS/OPEN-ENDED TERMS	c. COSATI Field/Group

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Technology Evaluation Report
SITE Program Demonstration Test
Soliditech, Inc. Solidification/Stabilization Process

Volume II

SITE Project Manager
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Risk Reduction Engineering Laboratory
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APPENDIX A

LABORATORY DATA FROM THE TECHNOLOGY DEMONSTRATION

Appendix A contains raw data from samples analyzed to evaluate the Soliditech solidification/stabilization process. Selected field, analytical, and matrix samples were analyzed in duplicate. The values given in the raw data tables are from one of the duplicate samples. The results for duplicates and an analysis of variability are presented in Appendix B and its Attachment A. The data presented in this appendix are summarized in the tables in Volume I of this Technology Evaluation Report.

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Volume I

Technology Evaluation Report

Volume II

Appendix A -- Laboratory Data from the Technology Demonstration
Appendix B -- Laboratory QA/QC Results
Appendix C -- Laboratory Data from the Treatability Study
Appendix D -- Results of Field Experiments
Appendix E -- PRC Trip Report
Appendix F -- Soliditech Documentation of Field Measurements
Appendix G -- Preliminary WILT Results

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The following footnotes were used to describe or qualify the data given in the Appendix A data tables:

NA	Not Analyzed.
NC	Not Calculable.
RSD	Relative Standard Deviation (%) = Standard Deviation/Mean * 100.
A	Sample results for permeability are expressed in exponential notation (base 10).
B	Detected in reagent blank; background correction not done.
E	Reported value is estimated due to the presence of a matrix interference.
M	MS recovery not within acceptable QA/QC limits.
R	Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.
^	Relative Percent Different of the duplicate analysis is not within acceptable QA/QC limits.
+	Relative Percent Difference between % recoveries of MS and MSD were not within acceptable QA/QC limits.

APPENDIX A

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TABLE A.1. TEST RESULTS FOR FILTER CAKE SOLIDS

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (mg/Kg)										
Acetone	<19	<18	<18	<19	NC	<18	<18	<18	<18	NC
Acrolein	<56	<55	<55	<56	NC	<55	<55	<55	<55	NC
Acrylonitrile	<22	<22	<22	<22	NC	<22	<22	<22	<22	NC
Benzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Bromoform	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Bromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
2-Butanone	<7.4	<7.3	<7.4	<7.4	NC	<7.3	<7.3	<7.3	<7.3	NC
Carbon Disulfide	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Carbon Tetrachloride	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chlorobenzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chlorodibromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
2-Chloroethyl vinyl ether	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloroform	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloromethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dibromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,4-Dichloro-2-butene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dichlorobromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dichlorodifluoromethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1-Dichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,2-Dichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1-Dichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,2-Dichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,2-Dichloropropane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC

TABLE A.1. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Ethyl benzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Ethyl methacrylate	<37	<37	<37	<37	NC	<37	<37	<37	<37	NC
2-Hexanone	<7.4	<7.3	<7.4	<7.4	NC	<7.3	<7.3	<7.3	<7.3	NC
Iodomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
4-Methyl-2-pentanone	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Methylene chloride	<7.4	<7.3	<7.4	<7.4	NC	<7.3	<7.3	<7.3	<7.3	NC
Styrene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,2,2-Tetrachloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Tetrachloroethylene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Toluene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,1-Trichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,2-Trichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Trichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Trichlorofluoromethane	<7.4	<7.3	<7.4	<7.4	NC	<7.3	<7.3	<7.3	<7.3	NC
1,2,3-Trichloropropane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Vinyl Acetate	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Vinyl chloride	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Xylenes	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Semivolatile Organic Compounds (mg/Kg)										
Acenaphthene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Acenaphthylene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Acetophenone	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
4-Aminobiphenyl	<250	<250	<250	<250	NC	<130	<130	<130	<130	NC

TABLE A.1 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Aniline	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
Anthracene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzidine	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzo(a)anthracene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzo(a)pyrene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzo(b)fluoranthene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzo(g,h,i)perylene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzo(k)fluoranthene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzoic acid	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Benzyl alcohol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
4-Bromophenyl phenyl ether	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Butyl benzyl phthalate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Di-n-butylphthalate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
4-Chloro-3-methylphenol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
p-Chloroaniline	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
Chlorobenzilate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
bis(2-Chloroethoxy)methane	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
bis(2-Chloroethyl)ether	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
bis(2-Chloroisopropyl)ether	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1-Chloronaphthalene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
2-Chloronaphthalene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
2-Chlorophenol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Chrysene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
o-Cresol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC

TABLE A 1. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
p Cresol	<10	<10	<10	<10	NC	13	14	15	14	7.1
Dibenz(a,j)acridine	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Dibenzo(a,h)anthracene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Dibenzofuran	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1,2-Dichlorobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1,3-Dichlorobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1,4-Dichlorobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
3,3'-Dichlorobenzidene	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
2,4-Dichlorophenol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
2,6-Dichlorophenol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Diethylphthalate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
p-Dimethylaminoazobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
7,12-Dimethylbenz(a)anthracene	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
a,a-Dimethylphenethylamine	<25	<25	<25	<25	NC	<13	<13	<13	<13	NC
2,4-Dimethylphenol	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Dimethylphthalate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
4,6-Dinitro-2-Methylphenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
1,3-Dinitrobenzene	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
2,4-Dinitrophenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
2,4-Dinitrotoluene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
2,6-Dinitrotoluene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Diphenylamine	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1,2-Diphenylhydrazine	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Ethyl methanesulfonate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
bis(2-Ethylhexyl)phthalate	<10	<10	<10	<10	NC	26	<5.0	<5.0	10	13:

TABLE A-1 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Fluorene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Hexachlorobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Hexachlorobutadiene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Hexachlorocyclopentadiene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Hexachloroethane	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Indeno(1,2,3-c,d)pyrene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Isophorone	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Methyl methanesulfonate	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
3-Methylcholanthrene	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
2-Methylnaphthalene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Naphthalene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1-Naphthylamine	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
2-Naphthylamine	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
5-Nitro-o-toluidine	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
2-Nitroaniline	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
3-Nitroaniline	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
4-Nitroaniline	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
Nitrobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
2-Nitrophenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
4-Nitrophenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
N-Nitrosodi-n-butylamine	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
N-Nitrosodimethylamine	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
N-Nitrosodiphenylamine	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
N-Nitrosodipropylamine	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC

TABLE A.1. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
Di-n-octylphthalate	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Pentachlorobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Pentachloronitrobenzene	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
Pentachlorophenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
Phenacetin	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
Phenanthrene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
Phenol	<10	<10	<10	<10	NC	12	11	13	12	8.3
2-Picoline	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
Pronamide	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
Pyrene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
1,2,4,5-Tetrachlorobenzene	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
2,3,4,6-Tetrachlorophenol	<100	<100	<100	<100	NC	<50	<50	<50	<50	NC
1,2,4-Trichlorobenzene	<10	<10	<10	<10	NC	<5.0	<5.0	<5.0	<5.0	NC
2,4,5-Trichlorophenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
2,4,6-Trichlorophenol	<50	<50	<50	<50	NC	<25	<25	<25	<25	NC
PCBs (mg/Kg)										
Aroclor-1016	<0.49	<0.098	<0.49	<0.49	NC	<0.20	<0.50	<1.0	<1.0	NC
Aroclor-1221	<0.49	<0.098	<0.49	<0.49	NC	<0.40	<1.0	<2.0	<2.0	NC
Aroclor-1232	<0.99	<0.20	<0.97	<0.99	NC	<0.40	<1.0	<2.0	<2.0	NC
Aroclor-1242	9.0	1.9	17	9.3	81	3.6	7.0	8.3	6.3	39
Aroclor-1248	<0.49	<0.098	<0.49	<0.49	NC	<0.20	<0.50	<1.0	<1.0	NC
Aroclor-1254	<0.99	<0.20	<0.97	<0.99	NC	<0.40	<1.0	<2.0	<2.0	NC
Aroclor-1260	15	5.6	35	19	81	5.7	12	13	10	39

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TABLE A 1. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/Kg)										
Arsenic, graphite AA	48	19	10	26	77	29	28	28	28	2.0
Mercury	<0.040	<0.040	0.070	<0.040	79	<0.040	<0.040	<0.040	<0.040	NC
Selenium, graphite AA	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Thallium, graphite AA	<0.050	0.20	0.27	0.17	76	<0.10	0.20	0.20	0.15	58
Metals (ICPES) (mg/Kg)										
Aluminum, ICPES	8800[E]	7800	8600	8400	6.3	18000	17000	17000	17000	3.3
Antimony, ICPES	<10	<10	<10	<10	NC	<50	<50	<50	<50	NC
Barium, ICPES	1400	2500	1900	1900	28	760	770	820	780	4.1
Beryllium, ICPES	0.30	0.10	0.10	0.17	69	<0.10	<0.10	<0.10	<0.10	NC
Cadmium, ICPES	0.60	<0.20	0.40	0.37	69	0.30	0.50	0.70	0.50	40
Calcium, ICPES	1700[E]	470	840	1000	63	120000	120000	100000	110000	10
Chromium, ICPES	8.0	3.0	3.0	4.7	62	20	21	18	20	7.8
Copper, ICPES	26	18	19	21	21	27	28	28	28	2.1
Lead, ICPES	1900[E]	2700	1900	2200	21	660	660	720	680	5.1
Nickel, ICPES	5.1	1.0	2.0	2.7	79	11	11	10	11	5.4
Silver, ICPES	<1.0	<1.0	<1.0	<1.0	NC	<1.0	<2.0	<2.0	<2.0	NC
Sodium, ICPES	100	70	80	83	18	420	460	400	430	7.2
Zinc, ICPES	55[E]	9.9	12	26	99	22	24	22	23	5.1
Other Chemical and Physical Tests										
Bulk Density (g/cm3)	1.12	1.17	1.12	1.14	2.5	1.44	1.42	1.43	1.43	0.7
Eh (mV)	345	163	404	370	8.3	-28	-34	-30	-31	-10
Loss on Ignition at 550C (mg/Kg)	560000	480000	570000	540000	9.2	430000	410000	400000	410000	3.7
Oil and grease, infrared (mg/Kg)	270000	130000	120000	170000	48	74000	77000	80000	77000	3.9
Particle Size (mm)	0.60	0.13	0.22	0.32	80	NA	NA	NA	NC	NC
Permeability (cm/sec) A	NA	NA	NA	NC	NC	2.90e-007	2.40e-007	8.30e-007	4.53e-007	72
Unconfined Compressive Strength (psi)	NA	NA	NA	NC	NC	507	398	270	390	30
Water Content (%)	27.7	29.2	29.1	28.7	3.0	22.6	20.0	20.4	21.0	6.7

TABLE A 1 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
pH (pH units)	3.3	3.5	3.4	3.4	1.8	11.8	11.8	11.6	11.8	1.2

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

E: Reported value is estimated due to the presence of a matrix interference.

^: Relative Percent Difference of the duplicate analysis is not within acceptable QA/QC limits.

A: Sample results for permeability are expressed in exponential notation (base 10).

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TABLE A.2. TEST RESULTS FOR FILTER CAKE/OILY SLUDGE SOLIDS

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (mg/Kg)										
Acetone	<19	<18	<19	<19	NC	<18	<18	<18	<18	NC
Acrolein	<56	<55	<56	<56	NC	<55	<55	<55	<55	NC
Acrylonitrile	<22	<22	<23	<23	NC	<22	<22	<22	<22	NC
Benzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Bromoform	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Bromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
2-Butanone	<7.4	<7.4	<7.5	<7.5	NC	<7.4	<7.4	<7.4	<7.4	NC
Carbon Disulfide	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Carbon Tetrachloride	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chlorobenzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chlorodibromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
2-Chloroethyl vinyl ether	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloroform	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloromethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dibromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,4-Dichloro-2-butene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dichlorobromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dichlorodifluoromethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1-Dichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,2-Dichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1-Dichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,2-Dichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,2-Dichloropropane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC

TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Ethyl benzene	3.0	7.8	2.2	4.3	70	<2.2	<2.2	<2.2	<2.2	NC
Ethyl methacrylate	<37	<37	<38	<38	NC	<37	<37	<37	<37	NC
2-Hexanone	<7.4	<7.4	<7.5	<7.5	NC	<7.4	<7.4	<7.4	<7.4	NC
Iodomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
4-Methyl-2-pentanone	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Methylene chloride	<7.4	<7.4	<7.5	<7.5	NC	<7.4	<7.4	<7.4	<7.4	NC
Styrene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,2,2-Tetrachloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Tetrachloroethylene	<1.5	3.3	<1.5	1.6	92	<1.5	<1.5	<1.5	<1.5	NC
Toluene	6.3	14	4.9	8.4	58	<4.9	<4.9	<4.9	<4.9	NC
1,1,1-Trichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,2-Trichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Trichloroethene	2.6	5.0	2.2	3.3	46	<2.2	<2.2	<2.2	<2.2	NC
Trichlorofluoromethane	<7.4	<7.4	<7.5	<7.5	NC	<7.4	<7.4	<7.4	<7.4	NC
1,2,3-Trichloropropane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Vinyl Acetate	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Vinyl chloride	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Xylenes	22	55	18	32	64	<18	<18	<18	<18	NC
Semivolatile Organic Compounds (mg/Kg)										
Acenaphthene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Acenaphthylene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Acetophenone	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Aminobiphenyl	<250	<130	<130	<250	NC	<83	<83	<83	<83	NC

TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Aniline	<20	<10	<10	<20	NC	<6.6	<6.6	<6.6	<6.6	NC
Anthracene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzidine	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(a)anthracene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(a)pyrene	<16	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(b)fluoranthene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(g,h,i)perylene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(k)fluoranthene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzoic acid	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzyl alcohol	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Bromophenyl phenyl ether	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Butyl benzyl phthalate	<10	65	78	49	79	<3.3	<3.3	<3.3	<3.3	NC
Di-n-butylphthalate	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Chloro-3-methylphenol	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
p-Chloroaniline	<20	<10	<10	<20	NC	<6.6	<6.6	<6.6	<6.6	NC
Chlorobenzilate	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Chloroethoxy)methane	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Chloroethyl)ether	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Chloroisopropyl)ether	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
1-Chloronaphthalene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Chloronaphthalene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Chlorophenol	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Chlorophenyl phenyl ether	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Chrysene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
o-Cresol	<10	5.0	<5.0	<10	35	<3.3	<3.3	<3.3	<3.3	NC

TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
p-Cresol	<10	<5.0	<5.0	<10	NC	5.0	4.3	4.0	4.4	12
Dibenz(a,j)acridine	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Dibenzo(a,h)anthracene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Dibenzofuran	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
1,2-Dichlorobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
1,3-Dichlorobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
1,4-Dichlorobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
3,3'-Dichlorobenzidene	<20	<10	<10	<20	NC	<6.6	<6.6	<6.6	<6.6	NC
2,4-Dichlorophenol	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
2,6-Dichlorophenol	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Diethylphthalate	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
p-Dimethylaminoazobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
7,12-Dimethylbenz(a)anthracene	<20	<10	<10	<20	NC	<6.6	<6.6	<6.6	<6.6	NC
a,a-Dimethylphenethylamine	<25	<13	<13	<25	NC	<8.3	<8.3	<8.3	<8.3	NC
2,4-Dimethylphenol	<10	<5.0	<5.0	<10	NC	4.0	3.3	3.7	3.7	9.6
Dimethylphthalate	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
4,6-Dinitro-2-Methylphenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
1,3-Dinitrobenzene	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
2,4-Dinitrophenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
2,4-Dinitrotoluene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
2,6-Dinitrotoluene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Diphenylamine	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
1,2-Diphenylhydrazine	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Ethyl methanesulfonate	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Ethylhexyl)phthalate	<10	<5.0	<5.0	<10	NC	<3.3	3.7	<3.3	<3.3	51

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TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Fluorene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachlorobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachlorobutadiene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachlorocyclopentadiene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachloroethane	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Indeno(1,2,3-c,d)pyrene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Isophorone	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Methyl methanesulfonate	<20	<10	<10	<20	NC	<6.6	<6.6	<6.6	<6.6	NC
3-Methylcholanthrene	<20	<10	<10	<20	NC	<6.6	<6.6	<6.6	<6.6	NC
2-Methylnaphthalene	16	17	7.8	14	37	4.3	4.3	4.7	4.4	5.2
Naphthalene	<10	9.4	<5.0	<10	62	<3.3	<3.3	<3.3	<3.3	NC
1-Naphthylamine	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
2-Naphthylamine	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
5-Nitro-o-toluidine	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
2-Nitroaniline	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
3-Nitroaniline	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
4-Nitroaniline	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
Nitrobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Nitrophenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
4-Nitrophenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
N-Nitrosodi-n-butylamine	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
N-Nitrosodimethylamine	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
N-Nitrosodiphenylamine	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
N-Nitrosodipropylamine	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC

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TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
Di-n-octylphthalate	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Pentachlorobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Pentachloronitrobenzene	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
Pentachlorophenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
Phenacetin	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
Phenanthrene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
Phenol	<10	<5.0	<5.0	<10	NC	5.3	5.0	4.0	4.8	14
2-Picoline	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
Pronamide	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
Pyrene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
1,2,4,5-Tetrachlorobenzene	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
2,3,4,6-Tetrachlorophenol	<100	<50	<50	<100	NC	<33	<33	<33	<33	NC
1,2,4-Trichlorobenzene	<10	<5.0	<5.0	<10	NC	<3.3	<3.3	<3.3	<3.3	NC
2,4,5-Trichlorophenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
2,4,6-Trichlorophenol	<50	<25	<25	<50	NC	<17	<17	<17	<17	NC
PCBs (mg/Kg)										
Aroclor-1016	<0.50	<0.47	<0.99	<0.99	NC	<0.67	<0.67	<0.67	<0.67	NC
Aroclor-1221	<0.50	<0.47	<0.99	<0.99	NC	<1.3	<1.3	<1.3	<1.3	NC
Aroclor-1232	<1.0	<0.93	<2.0	<2.0	NC	<1.3	<1.3	<1.3	<1.3	NC
Aroclor-1242	13	11	23	16	41	6.2	7.1	5.3	6.2	15
Aroclor-1248	<0.50	<0.47	<0.99	<0.99	NC	<0.67	<0.67	<0.67	<0.67	NC
Aroclor-1254	<1.0	<0.93	<2.0	<2.0	NC	<1.3	<1.3	<1.3	<1.3	NC
Aroclor-1260	25	21	35	27	27	9.1	8.7	7.3	8.4	11

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TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/Kg)										
Arsenic, graphite AA	16	13	14	14	11	36	42	41	40	8.1
Mercury	<0.040	<0.040	<0.040	<0.040	NC	<0.040	<0.040	<0.040	<0.040	NC
Selenium, graphite AA	<0.20	<0 20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Thallium, graphite AA	<0.050	0.060	0.070	0.052	46	0.20	0.10	<0.10	0.12	65
Metals (ICPES) (mg/Kg)										
Aluminum, ICPES	6300	5300	4800	5500	14	18000	18000	18000	18000	0
Antimony, ICPES	<10	<10	<10	<10	NC	<100	<100	<100	<100	NC
Barium, ICPES	1200[E]	1400	2100	1600	30	1000	1000	1000	1000	0
Beryllium, ICPES	0.20	0.10	0.10	0.13	43	0.30	0.20	0.20	0.23	25
Cadmium, ICPES	0.60	0.90	1.6	1.0	50	1.0	1.0	1.0	1.0	0
Calcium, ICPES	1200	1200	1300	1200	4.7	190000	190000	190000	190000	0
Chromium, ICPES	5.0	5.0	7.0	5.7	20	28	28	29	28	2.0
Copper, ICPES	28	29	44	34	27	47[E]	41	40	43	8.9
Lead, ICPES	1600	2000	3800	2500	48	860[E]	850	840	850	1.2
Nickel, ICPES	2.0	3.0	4.0	3.0	33	16	16	16	16	0
Silver, ICPES	<1.0	<1.0	<1.0	<1.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Sodium, ICPES	910	970	980	950	4.0	1800	1800	1700	1800	3.3
Zinc, ICPES	72	100	280	150	75	53[E]	54	56	54	2.8
Other Chemical and Physical Tests										
Bulk Density (g/cm3)	1.20	1.24	1.14	1.19	4.2	1.66	1.68	1.69	1.68	0.9
Eh (mV)	230	228	215	220	3.6	-44	-40	-51	-45	- 12
Loss on ignition at 550C (mg/Kg)	670000	690000	740000	700000	5.2	340000	340000	340000	340000	0
Oil and grease, infrared (mg/Kg)	94000	180000	120000	130000	34	60000	59000	62000[M^]	60000	2.5
Particle Size (mm)	0.30	0.45	0.63	0.46	36	NA	NA	NA	NC	NC
Permeability (cm/sec) A	NA	NA	NA	NC	NC	7.60e-009	2.10e-009	1.71e-008	8.93e-009	85
Unconfined Compressive Strength (psi)	NA	NA	NA	NC	NC	909	908	750	860	11
Water Content (%)	59.8	59.9	54.5	58.1	5.3	14.9	13.8	15.3	14.7	5.3

TABLE A.2. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
pH (pH units)	3.7	3.6	3.6	3.6	1.9	11.9	11.9	12.0	12.0	0.0

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

E: Reported value is estimated due to the presence of a matrix interference.

M: MS recovery not within acceptable QA/QC limits.

^: Relative Percent Difference of the duplicate analysis is not within acceptable QA/QC limits.

A: Sample results for permeability are expressed in exponential notation (base 10).

TABLE A.3 TEST RESULTS FOR OFF-SITE AREA ONE SOLIDS

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (mg/Kg)										
Acetone	<18	<19	<19	<19	NC	<18	<18	<18	<18	NC
Acrolein	<55	<56	<56	<56	NC	<55	<55	<55	<55	NC
Acrylonitrile	<22	<22	<22	<22	NC	<22	<22	<22	<22	NC
Benzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Bromoform	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Bromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
2-Butanone	<7.4	<7.4	<7.4	<7.4	NC	<7.4	<7.4	<7.4	<7.4	NC
Carbon Disulfide	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Carbon Tetrachloride	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chlorobenzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chlorodibromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
2-Chloroethyl vinyl ether	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloroform	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Chloromethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dibromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,4-Dichloro-2-butene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dichlorobromomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Dichlorodifluoromethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1-Dichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,2-Dichloroethane	<1.5	2.0	<1.5	<1.5	62	<1.5	<1.5	<1.5	<1.5	NC
1,1-Dichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,2-Dichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,2-Dichloropropane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC

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TABLE A.3. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
trans-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Ethyl benzene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Ethyl methacrylate	<37	<37	<37	<37	NC	<37	<37	<37	<37	NC
2-Hexanone	<7.4	<7.4	<7.4	<7.4	NC	<7.4	<7.4	<7.4	<7.4	NC
Iodomethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
4-Methyl-2-pentanone	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Methylene chloride	<7.4	<7.4	<7.4	<7.4	NC	<7.4	<7.4	<7.4	<7.4	NC
Styrene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,2,2-Tetrachloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Tetrachloroethylene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Toluene	8.2	8.8	7.9	8.3	5.5	<7.9	<7.9	<7.9	<7.9	NC
1,1,1-Trichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
1,1,2-Trichloroethane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Trichloroethene	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Trichlorofluoromethane	<7.4	<7.4	<7.4	<7.4	NC	<7.4	<7.4	<7.4	<7.4	NC
1,2,3-Trichloropropane	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Vinyl Acetate	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Vinyl chloride	<1.5	<1.5	<1.5	<1.5	NC	<1.5	<1.5	<1.5	<1.5	NC
Xylenes	2.2	2.3	2.2	2.2	2.6	<2.2	<2.2	<2.2	<2.2	NC
Semivolatile Organic Compounds (mg/Kg)										
Acenaphthene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Acenaphthylene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Acetophenone	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Aminobiphenyl	<130	<130	<130	<130	NC	<83	<83	<83	<83	NC

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TABLE A 3 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Aniline	<10	<10	<10	<10	NC	<6.6	<6.6	<6.6	<6.6	NC
Anthracene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzidine	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(a)anthracene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(a)pyrene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(b)fluoranthene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(g,h,i)perylene	<5.0	<5.0	<3.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzo(k)fluoranthene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzoic acid	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Benzyl alcohol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Bromophenyl phenyl ether	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Butyl benzyl phthalate	22	110	14	49	109	4.0	4.5	4.3	4.3	5.9
Di-n-butylphthalate	<5.0	7.6	<5.0	<5.0	70	<3.3	<3.3	<3.3	<3.3	NC
4-Chloro-3-methylphenol	<5.6	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
p-Chloroaniline	<10	<10	<10	<10	NC	<6.6	<6.6	<6.6	<6.6	NC
Chlorobenzilate	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Chloroethoxy)methane	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Chloroethyl)ether	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Chloroisopropyl)ether	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1-Chloronaphthalene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Chloronaphthalene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Chlorophenol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
4-Chlorophenyl phenyl ether	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Chrysene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
o-Cresol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC

TABLE A.3 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
p-Cresol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Dibenz(a,j)acridine	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Dibenzo(a,h)anthracene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Dibenzofuran	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1,2-Dichlorobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1,3-Dichlorobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1,4-Dichlorobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
3,3'-Dichlorobenzidene	<10	<10	<10	<10	NC	<6.6	<6.6	<6.6	<6.6	NC
2,4-Dichlorophenol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2,6-Dichlorophenol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Diethylphthalate	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
p-Dimethylaminoazobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
7,12-Dimethylbenz(a)anthracene	<10	<10	<10	<10	NC	<6.6	<6.6	<6.6	<6.6	NC
α,α-Dimethylphenethylamine	<13	<13	<13	<13	NC	<8.3	<8.3	<8.3	<8.3	NC
2,4-Dimethylphenol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Dimethylphthalate	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
4,6-Dinitro-2-Methylphenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
1,3-Dinitrobenzene	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
2,4-Dinitrophenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
2,4-Dinitrotoluene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2,6-Dinitrotoluene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Diphenylamine	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1,2-Diphenylhydrazine	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Ethyl methanesulfonate	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
bis(2-Ethylhexyl)phthalate	14	55	<5.0	24	116	5.7	11	8.0	8.2	32

TABLE A-3 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Fluorene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachlorobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachlorobutadiene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachlorocyclopentadiene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Hexachloroethane	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Indeno(1,2,3-c,d)pyrene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Isophorone	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Methyl methanesulfonate	<10	<10	<10	<10	NC	<6.6	<6.6	<6.6	<6.6	NC
3-Methylcholanthrene	<10	<10	<10	<10	NC	<6.6	<6.6	<6.6	<6.6	NC
2-Methylnaphthalene	6.1	6.2	6.2	6.2	0.9	3.3	4.0	4.0	3.8	11
Naphthalene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1-Naphthylamine	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
2-Naphthylamine	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
5-Nitro-o-toluidine	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
2-Nitroaniline	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
3-Nitroaniline	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
4-Nitroaniline	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
Nitrobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Nitrophenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
4-Nitrophenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
N-Nitrosodi-n-butylamine	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
N-Nitrosodimethylamine	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
N-Nitrosodiphenylamine	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
N-Nitrosodipropylamine	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC

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TABLE A.3 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
Di-n-octylphthalate	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Pentachlorobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Pentachloronitrobenzene	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
Pentachlorophenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
Phenacetin	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
Phenanthrene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
Phenol	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2-Picoline	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
Pronamide	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
Pyrene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
1,2,4,5-Tetrachlorobenzene	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
2,3,4,6-Tetrachlorophenol	<50	<50	<50	<50	NC	<33	<33	<33	<33	NC
1,2,4-Trichlorobenzene	<5.0	<5.0	<5.0	<5.0	NC	<3.3	<3.3	<3.3	<3.3	NC
2,4,5-Trichlorophenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
2,4,6-Trichlorophenol	<25	<25	<25	<25	NC	<17	<17	<17	<17	NC
PCBs (mg/Kg)										
Aroclor-1016	<0.96	<0.93	<0.95	<0.96	NC	<0.67	<0.67	<0.080	<0.67	NC
Aroclor-1221	<0.96	<0.93	<0.95	<0.96	NC	<1.3	<1.3	<0.16	<1.3	NC
Aroclor-1232	<1.9	<1.9	<1.9	<1.9	NC	<1.3	<1.3	<0.16	<1.3	NC
Aroclor-1242	31	26	30	29	9.1	39	24	37	33	24
Aroclor-1248	<0.96	<0.93	<0.95	<0.96	NC	<0.67	<0.67	<0.080	<0.67	NC
Aroclor-1254	<1.9	<1.9	<1.9	<1.9	NC	<1.3	<1.3	<0.16	<1.3	NC
Aroclor-1260	15	13	15	14	8.1	6.9	5.6	9.9	7.5	30

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TABLE A.3. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/Kg)										
Arsenic, graphite AA	92	95[R]	94	94	1.6	90	94	93[R]	92	2.3
Mercury	0.16	0.16[R]	0.17	0.16	3.5	0.10	0.20	0.22[R]	0.17	37
Selenium, graphite AA	0.30	0.30[R]	<0.20	0.23	49	<0.20	<0.20	<0.20[R]	<0.20	NC
Thallium, graphite AA	<0.050	<0.050[R]	<0.050	<0.050	NC	<0.10	<0.10	<0.10[R]	<0.10	NC
Metals (ICPES) (mg/Kg)										
Aluminum, ICPES	3300	5300[R]	3500	4000	27	11000	11000	11000[R]	11000	0
Antimony, ICPES	<10	<9.0[R]	<10	<10	NC	<100	<100	<100[R]	<100	NC
Barium, ICPES	680	720[R]	690	700	3.0	560	590	580[R]	580	2.6
Beryllium, ICPES	0.20	0.30	0.20	0.23	25	<0.10	<0.10	0.10[R]	<0.10	47
Cadmium, ICPES	1.6	1.7	1.3	1.5	14	0.70	0.60	0.80[R]	0.70	14
Calcium, ICPES	3800	5800[R]	4200	4600	23	150000	150000	150000	150000	0
Chromium, ICPES	11	12	11	11	5.1	28	29	29[R]	29	2.0
Copper, ICPES	33	33[R]	32	33	1.8	43	44	42[R]	43	2.3
Lead, ICPES	630	680[R]	650	650	3.9	460	490	490[R]	480	3.6
Nickel, ICPES	3.0	3.0[R]	2.0	2.7	22	13	13	13[R]	13	0
Silver, ICPES	<1.0	<1.0[R]	<1.0	<1.0	NC	<2.0	<2.0	<1.0	<2.0	NC
Sodium, ICPES	80	100	100	93	12	480	490	480[R]	480	1.2
Zinc, ICPES	130	120	120	120	4.7	92	95	97[R]	95	2.7
Other Chemical and Physical Tests										
Bulk Density (g/cm3)	1.19	1.38	1.20	1.26	8.5	1.58	1.59	1.60	1.59	0.6
Eh (mV)	110	106	92	100	9.2	-59	-69	-62	-63	-8.1
Loss on ignition at 550C (mg/Kg)	360000	350000	380000	360000	4.2	330000	350000	330000	340000	3.4
Oil and grease, infrared (mg/Kg)	27000	31000	26000	28000	9.4	42000	48000	47000	46000	7.0
Particle Size (mm)	0.42	0.40	0.43	0.42	3.7	NA	NA	NA	NC	NC
Permeability (cm/sec) A	NA	NA	NA	NC	NC	5.03e-008	3.59e-008	1.62e-008	3.41e-008	50
Unconfined Compressive Strength (psi)	NA	NA	NA	NC	NC	654	617	761	680	11
Water Content (%)	23.6	23.7	23.2	23.5	1.1	13.4	14.6	9.7	12.6	20

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TABLE A.1 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
pH (pH units)	7.4	8.5	7.9	7.9	7.4	12.0	12.0	11.9	12.0	0.4

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

B: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

^: Relative Percent Difference of the duplicate analysis is not within acceptable QA/QC limits.

+: Relative Percent Difference between % recoveries of MS and MSD are not within acceptable QA/QC limits.

A: Sample results for permeability are expressed in exponential notation (base 10).

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TABLE A.4. WET/DRY WEATHERING OF TREATED SOILS COLLECTED AS FIELD CORES FROM THE SOLIDITECH SITE DEMONSTRATION

Sample Source	Block Number	Cumulative Corrected Relative Weight Loss, grams												UCS psi
		Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	
Off-Site Area One	R-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	210
	R-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	230
	R-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190
	R-3 dup.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160
Filter Cake	R-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150
	R-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	130
	R-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83
Filter Cake/ Oily Sludge	R-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	250
	R-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	200
	R-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	210

TABLE A.5. FREEZE/THAW WEATHERING OF TREATED SOILS COLLECTED AS FIELD CORES FROM THE SOLIDITECH SITE DEMONSTRATION

Sample Source	Block Number	Cumulative Corrected Relative Weight Loss, grams												UCS psi
		Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	
Off-Site Area One	R-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	170
	R-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	210
	R-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190
Filter Cake	R-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150
	R-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150
	R-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86
	R-3 dup.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68
Filter Cake/ Oily Sludge	R-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	340
	R-2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	170
	R-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360

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TABLE A.6. ACID NEUTRALIZATION CAPACITY RESULTS FOR PRE-TREATMENT WASTES

Waste Type	Replicate	pH[0]	pH[1]	pH[2]	pH[3]	pH[4]	pH[5]	pH[6]	pH[7]	pH[8]	pH[9]	pH[10]
Off-Site Area One	R-1	8.83	4.35	2.50	1.58	1.37	1.26	1.19	1.11	1.09	1.07	1.03
Off-Site Area One	R-2	8.73	3.88	3.80	2.60	1.76	1.23	1.18	1.15	1.08	1.06	1.02
Off-Site Area One	R-3	8.66	4.95	3.03	1.46	1.29	1.20	1.14	1.08	1.04	1.00	0.99
Filter Cake	R-1	3.68	1.96	1.50	1.32	1.23	1.18	1.14	1.00	0.95	0.92	0.88
Filter Cake	R-2	3.23	1.91	1.62	1.37	1.24	1.17	1.11	1.07	1.02	0.99	0.96
Filter Cake	R-3	2.90	1.82	1.44	1.28	1.18	1.10	1.04	0.99	0.94	0.93	0.89
Filter Cake/Oily Sludge	R-1	2.97	1.84	1.39	1.16	1.06	0.99	0.95	0.90	0.87	0.84	0.81
Filter Cake/Oily Sludge	R-2	2.90	1.88	1.39	1.19	1.07	0.98	0.93	0.89	0.85	0.83	0.80
Filter Cake/Oily Sludge	R-3	4.20	2.09	1.56	1.32	1.18	1.11	1.03	0.97	0.92	0.88	0.85

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TABLE A.7. TEST RESULTS FOR REAGENT MIX SOLIDS

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Semivolatile Organic Compounds (mg/Kg)					
Acenaphthene	<1.0	<1.0		<1.0	NC
Acenaphthylene	<1.0	<1.0		<1.0	NC
Acetophenone	<1.0	<1.0		<1.0	NC
4-Aminobiphenyl	<25	<25		<25	NC
Aniline	<2.0	<2.0		<2.0	NC
Anthracene	<1.0	<1.0		<1.0	NC
Benzidine	<1.0	<1.0		<1.0	NC
Benzo(a)anthracene	<1.0	<1.0		<1.0	NC
Benzo(a)pyrene	<1.0	<1.0		<1.0	NC
Benzo(b)fluoranthene	<1.0	<1.0		<1.0	NC
Benzo(g,h,i)perylene	<1.0	<1.0		<1.0	NC
Benzo(k)fluoranthene	<1.0	<1.0		<1.0	NC
Benzoic acid	<1.0	<1.0		<1.0	NC
Benzyl alcohol	<1.0	<1.0		<1.0	NC
4-Bromophenyl phenyl ether	<1.0	<1.0		<1.0	NC
Butyl benzyl phthalate	<1.0	<1.0		<1.0	NC
Di-n-butylphthalate	<1.0	<1.0		<1.0	NC
4-Chloro-3-methylphenol	<1.0	<1.0		<1.0	NC
p-Chloroaniline	<2.0	<2.0		<2.0	NC
Chlorobenzilate	<1.0	<1.0		<1.0	NC
bis(2-Chloroethoxy)methane	<1.0	<1.0		<1.0	NC
bis(2-Chloroethyl)ether	<1.0	<1.0		<1.0	NC
bis(2-Chloroisopropyl)ether	<1.0	<1.0		<1.0	NC
1-Chloronaphthalene	<1.0	<1.0		<1.0	NC

TABLE A.7. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
2-Chloronaphthalene	<1.0	<1.0		<1.0	NC
2-Chlorophenol	<1.0	<1.0		<1.0	NC
4-Chlorophenyl phenyl ether	<1.0	<1.0		<1.0	NC
Chrysene	<1.0	<1.0		<1.0	NC
o-Cresol	<1.0	<1.0		<1.0	NC
p-Cresol	<1.0	<1.0		<1.0	NC
Dibenz(a,j)acridine	<1.0	<1.0		<1.0	NC
Dibenzo(a,h)anthracene	<1.0	<1.0		<1.0	NC
Dibenzofuran	<1.0	<1.0		<1.0	NC
1,2-Dichlorobenzene	<1.0	<1.0		<1.0	NC
1,3-Dichlorobenzene	<1.0	<1.0		<1.0	NC
1,4-Dichlorobenzene	<1.0	<1.0		<1.0	NC
3,3'-Dichlorobenzidene	<2.0	<2.0		<2.0	NC
2,4-Dichlorophenol	<1.0	<1.0		<1.0	NC
2,6-Dichlorophenol	<1.0	<1.0		<1.0	NC
Diethylphthalate	<1.0	<1.0		<1 0	NC
p-Dimethylaminoazobenzene	<1.0	<1.0		<1.0	NC
7,12-Dimethylbenz(a)anthracene	<2.0	<2.0		<2.0	NC
a,a-Dimethylphenethylamine	<2.5	<2.5		<2.5	NC
2,4-Dimethylphenol	<1.0	<1.0		<1.0	NC
Dimethylphthalate	<1.0	<1.0		<1.0	NC
4,6-Dinitro-2-Methylphenol	<5.0	<5.0		<5.0	NC
1,3-Dinitrobenzene	<10	<10		<10	NC
2,4-Dinitrophenol	<5.0	<5.0		<5.0	NC
2,4-Dinitrotoluene	<1.0	<1.0		<1.0	NC

TABLE A.7. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
2,6-Dinitrotoluene	<1.0	<1.0		<1.0	NC
Diphenylamine	<1.0	<1.0		<1.0	NC
1,2-Diphenylhydrazine	<1.0	<1.0		<1.0	NC
Ethyl methanesulfonate	<1.0	<1.0		<1.0	NC
bis(2-Ethylhexyl)phthalate	<1.0	<1.0		<1.0	NC
Fluoranthene	<1.0	<1.0		<1.0	NC
Fluorene	<1.0	<1.0		<1.0	NC
Hexachlorobenzene	<1.0	<1.0		<1.0	NC
Hexachlorobutadiene	<1.0	<1.0		<1.0	NC
Hexachlorocyclopentadiene	<1.0	<1.0		<1.0	NC
Hexachloroethane	<1.0	<1.0		<1.0	NC
Indeno(1,2,3-c,d)pyrene	<1.0	<1.0		<1.0	NC
Isophorone	<1.0	<1.0		<1.0	NC
Methyl methanesulfonate	<2.0	<2.0		<2.0	NC
3-Methylcholanthrene	<2.0	<2.0		<2.0	NC
2-Methylnaphthalene	<1.0	<1.0		<1.0	NC
Naphthalene	<1.0	<1.0		<1.0	NC
1-Naphthylamine	<10	<10		<10	NC
2-Naphthylamine	<10	<10		<10	NC
5-Nitro-o-toluidine	<5.0	<5.0		<5.0	NC
2-Nitroaniline	<5.0	<5.0		<5.0	NC
3-Nitroaniline	<5.0	<5.0		<5.0	NC
4-Nitroaniline	<5.0	<5.0		<5.0	NC
Nitrobenzene	<1.0	<1.0		<1.0	NC
2-Nitrophenol	<5.0	<5.0		<5.0	NC

TABLE A.7. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
4-Nitrophenol	<5.0	<5.0		<5.0	NC
N-Nitrosodi-n-butylamine	<5.0	<5.0		<5.0	NC
N-Nitrosodimethylamine	<5.0	<5.0		<5.0	NC
N-Nitrosodiphenylamine	<5.0	<5.0		<5.0	NC
N-Nitrosodipropylamine	<5.0	<5.0		<5.0	NC
N-Nitrosopiperidine	<5.0	<5.0		<5.0	NC
Di-n-octylphthalate	<1.0	<1.0		<1.0	NC
Pentachlorobenzene	<1.0	<1.0		<1.0	NC
Pentachloronitrobenzene	<10	<10		<10	NC
Pentachlorophenol	<5.0	<5.0		<5.0	NC
Phenacetin	<10	<10		<10	NC
Phenanthrene	<1.0	<1.0		<1.0	NC
Phenol	<1.0	<1.0		<1.0	NC
2-Picoline	<5.0	<5.0		<5.0	NC
Pronamide	<10	<10		<10	NC
Pyrene	<1.0	<1.0		<1.0	NC
1,2,4,5-Tetrachlorobenzene	<10	<10		<10	NC
2,3,4,6-Tetrachlorophenol	<10	<10		<10	NC
1,2,4-Trichlorobenzene	<1.0	<1.0		<1.0	NC
2,4,5-Trichlorophenol	<5.0	<5.0		<5.0	NC
2,4,6-Trichlorophenol	<5.0	<5.0		<5.0	NC
PCBs (mg/Kg)					
Aroclor-1016	<0.0020	<0.0020	<0.0020	<0.0020	NC
Aroclor-1221	<0.0040	<0.0040	<0.0040	<0.0040	NC

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TABLE A.7 (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Aroclor-1232	<0.0040	<0.0040	<0.0040	<0.0040	NC
Aroclor-1242	<0.0020	<0.0020	<0.0020	<0.0020	NC
Aroclor-1248	<0.0020	<0.0020	<0.0020	<0.0020	NC
Aroclor-1254	<0.0040	<0.0040	<0.0040	<0.0040	NC
Aroclor-1260	<0.0040	<0.0040	<0.0040	<0.0040	NC
Metals (AA) (mg/Kg)					
Arsenic, graphite AA	60	56	60	59	3.9
Mercury	<0.040	<0.040	<0.040	<0.040	NC
Selenium, graphite AA	<0.20	<0.20	<0.20	<0.20	NC
Thallium, graphite AA	0.20	0.20	0.10	0.17	35
Metals (ICPES) (mg/Kg)					
Aluminum, ICPES	23000	20000	23000	22000	7.9
Antimony, ICPES	<100	<100	<100	<100	NC
Barium, ICPES	1800	1600	1800	1700	6.7
Beryllium, ICPES	0.58	0.50	0.53	0.54	7.5
Cadmium, ICPES	1.3	1.3	1.0	1.2	14
Calcium, ICPES	180000	170000	180000	180000	3.3
Chromium, ICPES	39	37	39	38	3.0
Copper, ICPES	62	57	61	60	4.4
Lead, ICPES	20	19	20	20	2.9
Nickel, ICPES	21	20	22	21	4.8
Silver, ICPES	<1.0	<2.0	<2.0	<2.0	NC
Sodium, ICPES	2600	2300	2600	2500	6.9
Zinc, ICPES	40	37	40	39	4.4
Other Chemical and Physical Tests					
Eh (mV)	-67	-55	-58	-60	-10
pH (pH units)	12.0	12.1	12.1	12.1	0.3

TABLE A.7. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100

TABLE A.8. TEST RESULTS FOR SAND BLANK

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/Kg)					
Arsenic, graphite AA	0.20	0.10	<0.080	0.11	71
Mercury	<0.050	<0.050	<0.050	<0.050	NC
Selenium, graphite AA	<0.10	<0.10	<0.20	<0.20	NC
Thallium, graphite AA	<0.10	<0.10	<0.20	<0.20	NC
Metals (ICPES) (mg/Kg)					
Aluminum, ICPES	140	100	90	110	24
Antimony, ICPES	<20	<20	<20	<20	NC
Barium, ICPES	<0.90	<1.0	<0.90	<1.0	NC
Beryllium, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Cadmium, ICPES	<0.50	<0.50	<0.50	<0.50	NC
Calcium, ICPES	<90	<100	<90	<100	NC
Chromium, ICPES	<3.0	<3.0	<3.0	<3.0	NC
Copper, ICPES	<2.0	<2.0	<2.0	<2.0	NC
Lead, ICPES	<5.0	<5.0	<5.0	<5.0	NC
Nickel, ICPES	<2.0	<2.0	<2.0	<2.0	NC
Silver, ICPES	<3.0	<3.0	<3.0	<3.0	NC
Sodium, ICPES	<90	<100	<90	<100	NC
Zinc, ICPES	<2.0	<2.0	<2.0	<2.0	NC

NA: Not Analyzed

NC: Not Calculable

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100

TABLE A 9. TEST RESULTS FOR PRE DEMO BLANK

	R-1
Volatile Organic Compounds (mg/Kg)	
Acetone	0.15
Acrolein	<0.10
Acrylonitrile	<0.025
Benzene	1.7
Bromoform	<0.0020
Bromomethane	<0.0020
2-Butanone	0.099
Carbon Disulfide	<0.0020
Carbon Tetrachloride	<0.0020
Chlorobenzene	1.1
Chlorodibromomethane	<0.0020
Chloroethane	<0.0020
2-Chloroethyl vinyl ether	<0.0020
Chloroform	<0.0020
Chloromethane	<0.0020
Dibromomethane	<0.0020
trans-1,4-Dichloro-2-butene	<0.0020
Dichlorobromomethane	<0.0020
Dichlorodifluoromethane	<0.0020
1,1-Dichloroethane	<0.0020
1,2-Dichloroethane	<0.0020
1,1-Dichloroethene	<0.0020
trans-1,2-Dichloroethene	<0.0020
1,2-Dichloropropane	0.22
cis-1,3-Dichloropropene	<0.0020

TABLE A 9 (Continued)

	R-1
trans-1,3-Dichloropropene	<0.0020
Ethyl benzene	9.4
Ethyl methacrylate	<0.050
2-Hexanone	0.037
Iodomethane	<0.0020
4-Methyl-2-pentanone	1.4
Methylene chloride	0.044
Styrene	33
1,1,2,2-Tetrachloroethane	<0.0020
Tetrachloroethylene	17
Toluene	7.1
1,1,1-Trichloroethane	1.4
1,1,2-Trichloroethane	0.050
Trichloroethene	2.2
Trichlorofluoromethane	<0.010
1,2,3-Trichloropropane	<0.0020
Vinyl Acetate	<0.0020
Vinyl chloride	<0.0020
Xylenes	51
Semivolatile Organic Compounds (mg/Kg)	
Acenaphthene	15
Acenaphthylene	<5.0
Acetophenone	<5.0
4-Aminobiphenyl	<130
Aniline	<10

TABLE A 9 (Continued)

	R-1
Anthracene	30
Benzidine	<5.0
Benzo(a)anthracene	<5.0
Benzo(a)pyrene	<5.0
Benzo(b)fluoranthene	<5.0
Benzo(g,h,i)perylene	<5.0
Benzo(k)fluoranthene	<5.0
Benzoic acid	<5.0
Benzyl alcohol	<5.0
4-Bromophenyl phenyl ether	<5.0
Butyl benzyl phthalate	<5.0
Di-n-butylphthalate	9.5
4-Chloro-3-methylphenol	<5.0
p-Chloroaniline	<10
Chlorobenzilate	<5.0
bis(2-Chloroethoxy)methane	<5.0
bis(2-Chloroethyl)ether	<5.0
bis(2-Chloroisopropyl)ether	<5.0
1-Chloronaphthalene	<5.0
2-Chloronaphthalene	<5.0
2-Chlorophenol	<5.0
4-Chlorophenyl phenyl ether	<5.0
Chrysene	5.0
o-Cresol	<5.0
p-Cresol	<5.0
Dibenz(a,j)acridine	<5.0

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TABLE A 9. (Continued)

	R-1
Dibenzo(a,h)anthracene	<5.0
Dibenzofuran	9.5
1,2-Dichlorobenzene	<5.0
1,3-Dichlorobenzene	<5.0
1,4-Dichlorobenzene	<5.0
3,3'-Dichlorobenzidene	<10
2,4-Dichlorophenol	<5.0
2,6-Dichlorophenol	<5.0
Diethylphthalate	<5.0
p-Dimethylaminoazobenzene	<5.0
7,12-Dimethylbenz(a)anthracene	<10
a,a-Dimethylphenethylamine	<13
2,4-Dimethylphenol	<5.0
Dimethylphthalate	<5.0
4,6-Dinitro-2-Methylphenol	<25
1,3 Dinitrobenzene	<50
2,4-Dinitrophenol	<25
2,4-Dinitrotoluene	<5.0
2,6-Dinitrotoluene	<5.0
Diphenylamine	<5.0
1,2-Diphenylhydrazine	<5.0
Ethyl methanesulfonate	<5.0
bis(2 Ethylhexyl)phthalate	14
Fluoranthene	12
Fluorene	15
Hexachlorobenzene	370

TABLE A 9 (Continued)

	R 1
Hexachlorobutadiene	11
Hexachlorocyclopentadiene	<5.0
Hexachloroethane	<5.0
Indeno(1,2,3-c,d)pyrene	<5.0
Isophorone	7.5
Methyl methanesulfonate	<10
3-Methylcholanthrene	<10
2-Methylnaphthalene	150
Naphthalene	55
1-Naphthylamine	<50
2-Naphthylamine	<50
5-Nitro-o-toluidine	<25
2-Nitroaniline	<25
3-Nitroaniline	<25
4-Nitroaniline	<25
Nitrobenzene	<5.0
2-Nitrophenol	<25
4-Nitrophenol	<25
N-Nitrosodi-n-butylamine	<25
N-Nitrosodimethylamine	<25
N-Nitrosodiphenylamine	<25
N-Nitrosodipropylamine	<25
N-Nitrosopiperidine	<25
Di-n-octylphthalate	<5.0
Pentachlorobenzene	26
Pentachloronitrobenzene	<50

TABLE A.9 (Continued)

	R-1
Pentachlorophenol	<25
Phenacetin	<50
Phenanthrene	45
Phenol	50
2-Picoline	<25
Pronamide	<50
Pyrene	8.5
1,2,4,5-Tetrachlorobenzene	<50
2,3,4,6-Tetrachlorophenol	<50
1,2,4-Trichlorobenzene	<5.0
2,4,5-Trichlorophenol	<25
2,4,6-Trichlorophenol	<25
PCBs (mg/Kg)	
Aroclor-1016	<0.99
Aroclor-1221	<0.99
Aroclor-1232	<2.0
Aroclor-1242	<0.99
Aroclor-1248	<0.99
Aroclor-1254	<2.0
Aroclor-1260	<2.0
Metals (AA) (mg/Kg)	
Arsenic, graphite AA	95
Mercury	1.0
Selenium, graphite AA	<0.20
Thallium, graphite AA	0.10

TABLE A.9 (Continued)

	R-1
Metals (ICPES) (mg/Kg)	
Aluminum, ICPES	43000
Antimony, ICPES	65
Barium, ICPES	2500
Beryllium, ICPES	2.2
Cadmium, ICPES	7.1
Calcium, ICPES	130000
Chromium, ICPES	780
Copper, ICPES	380
Lead, ICPES	160
Nickel, ICPES	75
Silver, ICPES	<1.0
Sodium, ICPES	5400
Zinc, ICPES	840

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A.10. TCLP LEACHATE TEST RESULTS FOR REAGENT MIX

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (ug/L)					
Acetone	0.059	0.060	0.055	0.058	4.6
Acrolein	<0.10	<0.10	<0.10	<0.10	NC
Acrylonitrile	<0.025	<0.025	<0.025	<0.025	NC
Benzene	<0.0020	<0.0020	<0.0020	<0.0020	NC
Bromoform	<0.0020	<0.0020	<0.0020	<0.0020	NC
Bromomethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
2-Butanone	0.010	0.012	0.012	0.011	10
Carbon Disulfide	<0.0020	<0.0020	<0.0020	<0.0020	NC
Carbon Tetrachloride	<0.0020	<0.0020	<0.0020	<0.0020	NC
Chlorobenzene	<0.0020	<0.0020	<0.0020	<0.0020	NC
Chlorodibromomethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
Chloroethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
2-Chloroethyl vinyl ether	<0.0020	<0.0020	<0.0020	<0.0020	NC
Chloroform	<0.0020	<0.0020	0.0025[B]	<0.0020	58
Chloromethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
Dibromomethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
trans-1,4-Dichloro-2-butene	<0.0020	<0.0020	<0.0020	<0.0020	NC
Dichlorobromomethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
Dichlorodifluoromethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
1,1-Dichloroethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
1,2-Dichloroethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
1,1-Dichloroethene	<0.0020	<0.0020	<0.0020	<0.0020	NC
trans-1,2-Dichloroethene	<0.0020	<0.0020	<0.0020	<0.0020	NC
1,2-Dichloropropane	<0.0020	<0.0020	<0.0020	<0.0020	NC

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TABLE A.10. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<0.0020	<0.0020	<0.0020	<0.0020	NC
trans-1,3-Dichloropropene	<0.0020	<0.0020	<0.0020	<0.0020	NC
Ethyl benzene	<0.0020	<0.0020	0.0032	<0.0020	73
Ethyl methacrylate	<0.050	<0.050	<0.050	<0.050	NC
2-Hexanone	<0.010	<0.010	<0.010	<0.010	NC
Iodomethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
4-Methyl-2-pentanone	0.0071	0.0088	0.19	0.069	153
Methylene chloride	<0.010	<0.010	<0.010	<0.010	NC
Styrene	<0.0020	<0.0020	<0.0020	<0.0020	NC
1,1,2,2-Tetrachloroethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
Tetrachloroethylene	<0.0020	<0.0020	<0.0020	<0.0020	NC
Toluene	<0.0020	<0.0020	0.14	0.047	170
1,1,1-Trichloroethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
1,1,2-Trichloroethane	<0.0020	<0.0020	<0.0020	<0.0020	NC
Trichloroethene	<0.0020	<0.0020	<0.0020	<0.0020	NC
Trichlorofluoromethane	<0.010	<0.010	<0.010	<0.010	NC
1,2,3-Trichloropropane	<0.0020	<0.0020	<0.0020	<0.0020	NC
Vinyl Acetate	<0.0020	<0.0020	<0.0020	<0.0020	NC
Vinyl chloride	<0.0020	<0.0020	<0.0020	<0.0020	NC
Xylenes	<0.0020	<0.0020	0.033	0.012	158
Semivolatile Organic Compounds (ug/L)					
Acenaphthene	<10	<10	<10	<10	NC
Acenaphthylene	<10	<10	<10	<10	NC
Acetophenone	<10	<10	<10	<10	NC
4-Aminobiphenyl	<250	<250	<250	<250	NC

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TABLE A.10. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Aniline	<20	<20	<20	<20	NC
Anthracene	<10	<10	<10	<10	NC
Benzidine	<10	<10	<10	<10	NC
Benzo(a)anthracene	<10	<10	<10	<10	NC
Benzo(a)pyrene	<10	<10	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	<10	<10	NC
Benzo(k)fluoranthene	<10	<10	<10	<10	NC
Benzoic acid	<10	<10	<10	<10	NC
Benzyl alcohol	<10	<10	<10	<10	NC
4-Bromophenyl phenyl ether	<10	<10	<10	<10	NC
Butyl benzyl phthalate	<10	<10	<10	<10	NC
Di-n-butylphthalate	<10	<10	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	<10	<10	NC
p-Chloroaniline	<20	<20	<20	<20	NC
Chlorobenzilate	<10	<10	<10	<10	NC
bis(2-Chloroethoxy)methane	<10	<10	<10	<10	NC
bis(2-Chloroethyl)ether	<10	<10	<10	<10	NC
bis(2-Chloroisopropyl)ether	<10	<10	<10	<10	NC
1-Chloronaphthalene	<10	<10	<10	<10	NC
2-Chloronaphthalene	<10	<10	<10	<10	NC
2-Chlorophenol	<10	<10	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	NC
Chrysene	<10	<10	<10	<10	NC
o-Cresol	<10	<10	<10	<10	NC

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TABLE A 10. (Continued)

	Post treatment				
	R-1	R-2	R-3	Mean	RSD
p-Cresol	<10	<10	<10	<10	NC
Dibenz(a,j)acridine	<10	<10	<10	<10	NC
Dibenzo(a,h)anthracene	<10	<10	<10	<10	NC
Dibenzofuran	<10	<10	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	<10	<10	NC
3,3'-Dichlorobenzidene	<20	<20	<20	<20	NC
2,4-Dichlorophenol	<10	<10	<10	<10	NC
2,6-Dichlorophenol	<10	<10	<10	<10	NC
Diethylphthalate	<10	<10	<10	<10	NC
p-Dimethylaminoazobenzene	<10	<10	<10	<10	NC
7,12-Dimethylbenz(a)anthracene	<20	<20	<20	<20	NC
a,a-Dimethylphenethylamine	<25	<25	<25	<25	NC
2,4-Dimethylphenol	<10	<10	<10	<10	NC
Dimethylphthalate	<10	<10	<10	<10	NC
4,6-Dinitro-2-Methylphenol	<50	<50	<50	<50	NC
1,3-Dinitrobenzene	<100	<100	<100	<100	NC
2,4-Dinitrophenol	<50	<50	<50	<50	NC
2,4-Dinitrotoluene	<10	<10	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	<10	<10	NC
Diphenylamine	<10	<10	<10	<10	NC
1,2-Diphenylhydrazine	<10	<10	<10	<10	NC
Ethyl methanesulfonate	<10	<10	<10	<10	NC
bis(2-Ethylhexyl)phthalate	<10	<10	<10	<10	NC

TABLE A 10 (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<10	<10	<10	<10	NC
Fluorene	<10	<10	<10	<10	NC
Hexachlorobenzene	<10	<10	<10	<10	NC
Hexachlorobutadiene	<10	<10	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	<10	<10	NC
Hexachloroethane	<10	<10	<10	<10	NC
Indeno(1,2,3-c,d)pyrene	<10	<10	<10	<10	NC
Isophorone	<10	<10	<10	<10	NC
Methyl methanesulfonate	<20	<20	<20	<20	NC
3-Methylcholanthrene	<20	<20	<20	<20	NC
2-Methylnaphthalene	<10	<10	<10	<10	NC
Naphthalene	<10	<10	<10	<10	NC
1-Naphthylamine	<100	<100	<100	<100	NC
2-Naphthylamine	<100	<100	<100	<100	NC
5-Nitro-o-toluidine	<50	<50	<50	<50	NC
2-Nitroaniline	<50	<50	<50	<50	NC
3-Nitroaniline	<50	<50	<50	<50	NC
4-Nitroaniline	<50	<50	<50	<50	NC
Nitrobenzene	<10	<10	<10	<10	NC
2-Nitrophenol	<50	<50	<50	<50	NC
4-Nitrophenol	<50	<50	<50	<50	NC
N-Nitrosodi-n-butylamine	<50	<50	<50	<50	NC
N-Nitrosodimethylamine	<50	<50	<50	<50	NC
N-Nitrosodiphenylamine	<50	<50	<50	<50	NC
N-Nitrosodipropylamine	<50	<50	<50	<50	NC

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TABLE A 10. (Continued)

	Post Treatment				
	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<50	<50	<50	<50	NC
Di-n-octylphthalate	<10	<10	<10	<10	NC
Pentachlorobenzene	<10	<10	<10	<10	NC
Pentachloronitrobenzene	<100	<100	<100	<100	NC
Pentachlorophenol	<50	<50	<50	<50	NC
Phenacetin	<100	<100	<100	<100	NC
Phenanthrene	<10	<10	<10	<10	NC
Phenol	<10	<10	<10	<10	NC
2-Picoline	<50	<50	<50	<50	NC
Pronamide	<100	<100	<100	<100	NC
Pyrene	<10	<10	<10	<10	NC
1,2,4,5-Tetrachlorobenzene	<100	<100	<100	<100	NC
2,3,4,6-Tetrachlorophenol	<100	<100	<100	<100	NC
1,2,4-Trichlorobenzene	<10	<10	<10	<10	NC
2,4,5-Trichlorophenol	<50	<50	<50	<50	NC
2,4,6-Trichlorophenol	<50	<50	<50	<50	NC
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1221	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1232	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1242	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1248	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1254	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1260	<0.22	<0.20	<0.20	<0.22	NC

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TABLE A 10 (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.70	0.70	0.90	0.77	15
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	3.7	3.0	5.2	4.0	28
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	1900	1900	2000	1900	3.0
Chromium, ICPES	0.070	0.070	0.050	0.063	18
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	32	31	38	34	11
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Other Chemical and Physical Tests					
Eh (mV)	6	2.0	-42	-23	-97
Filterable Residue (TDS) (mg/L)	9500	8500	8800	8600	2.0
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
pH (pH units)	11.3	11.3	11.5	11.4	0.9

NA: Not Analyzed

NC: Not Calculable

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100

B: Detected in reagent blank; background subtraction not done.

TABLE A 11 TCLP LEACHATE TEST RESULTS FOR FILTER CAKE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (ug/L)										
Acetone	310	210	230	250	21	<210	<210	<210	<210	NC
Acrolein	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Acrylonitrile	<25	<25	<25	<25	NC	<25	<25	<25	<25	NC
Benzene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Bromoform	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Bromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
2-Butanone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Carbon Disulfide	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Carbon Tetrachloride	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chlorobenzene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chlorodibromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
2-Chloroethyl vinyl ether	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloroform	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloromethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dibromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,4-Dichloro-2-butene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dichlorobromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dichlorodifluoromethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1-Dichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,2-Dichloropropane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC

TABLE A.11. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,3-Dichloropropene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Ethyl benzene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Ethyl methacrylate	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2-Hexanone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Iodomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
4-Methyl-2-pentanone	<2.0	8.4	3.6	4.3	87	<2.0	<2.0	<2.0	<2.0	NC
Methylene chloride	<10	14	19	13	56	<10	<10	<10	<10	NC
Styrene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1,2,2-Tetrachloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Tetrachloroethylene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Toluene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1,1-Trichloroethane	10	<2.0	<2.0	4.0	130	<2.0	<2.0	<2.0	<2.0	NC
1,1,2-Trichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Trichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Trichlorofluoromethane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2,3-Trichloropropane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Vinyl Acetate	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Vinyl chloride	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Xylenes	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Semivolatile Organic Compounds (ug/L)										
Acenaphthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Acenaphthylene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Acetophenone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Aminobiphenyl	<250	<250	<250	<250	NC	<250	<250	<250	<250	NC

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TABLE A.11. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Aniline	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
Anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzidine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(a)anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(a)pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(k)fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzoic acid	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzyl alcohol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Bromophenyl phenyl ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Butyl benzyl phthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Di-n-butylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
p-Chloroaniline	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
Chlorobenzilate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroethoxy)methane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroethyl)ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroisopropyl)ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1-Chloronaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Chloronaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Chlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Chrysene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
o-Cresol	<10	<10	<10	<10	NC	46	77	63	62	25

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TABLE A 11 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
p-Cresol	<10	<10	<10	<10	NC	400	470	460	440	8.5
Dibenz(a,j)acridine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Dibenzo(a,h)anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Dibenzofuran	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
3,3'-Dichlorobenzidene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
2,4-Dichlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,6-Dichlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Diethylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
p-Dimethylaminoazobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
7,12-Dimethylbenz(a)anthracene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
a,a-Dimethylphenethylamine	<25	<25	<25	<25	NC	<25	<25	<25	<25	NC
2,4-Dimethylphenol	<10	<10	<10	<10	NC	<10	32	24	20	68
Dimethylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4,6-Dinitro-2-Methylphenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
1,3-Dinitrobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2,4-Dinitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2,4-Dinitrotoluene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Diphenylamine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2-Diphenylhydrazine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Ethyl methanesulfonate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Ethylhexyl)phthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC

TABLE A.11. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Fluorene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorobutadiene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachloroethane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Indeno(1,2,3-c,d)pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Isophorone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Methyl methanesulfonate	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
3-Methylcholanthrene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
2-Methylnaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Naphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1-Naphthylamine	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2-Naphthylamine	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
5-Nitro-o-toluidine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
3-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
4-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Nitrobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Nitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
4-Nitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodi-n-butylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodiethylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodiphenylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodipropylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC

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TABLE A.11. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Di-n-octylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Pentachlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Pentachloronitrobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Pentachlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Phenacetin	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Phenanthrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Phenol	<10	<10	<10	<10	NC	660	580	640	630	6.6
2-Picoline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Pronamide	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2,4,5-Tetrachlorobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2,3,4,6-Tetrachlorophenol	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
1,2,4-Trichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,4,5-Trichlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2,4,6-Trichlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
PCBs (ug/L)										
Aroclor-1016	<0.41	<0.42	<0.42	<0.42	NC	<0.40	<0.45	<0.43	<0.45	NC
Aroclor-1221	<0.41	<0.42	<0.42	<0.42	NC	<0.81	<0.90	<0.85	<0.90	NC
Aroclor-1232	<0.82	<0.83	<0.84	<0.84	NC	<0.81	<0.90	<0.85	<0.90	NC
Aroclor-1242	<0.41	<0.42	<0.42	<0.42	NC	<0.40	<0.45	<0.43	<0.45	NC
Aroclor-1248	<0.41	<0.42	<0.42	<0.42	NC	<0.40	<0.45	<0.43	<0.45	NC
Aroclor-1254	<0.82	<0.83	<0.84	<0.84	NC	<0.81	<0.90	<0.85	<0.90	NC
Aroclor-1260	<0.82	<0.83	<0.84	<0.84	NC	<0.81	<0.90	<0.85	<0.90	NC

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TABLE A.11. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.0060	0.0030	0.0060	0.0050	35	<0.0020	<0.0020	<0.0020[R]	<0.0020	NC
Lead, graphite AA	NA	NA	NA	NC	NC	0.0030	0.0020[M]	<0.0020	0.0020	50
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00030	<0.00030	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0050	<0.0050	<0.0050[R†]	<0.0050	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	<0.0010[R]	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.40	0.60	0.50	0.50	20	<0.20	<0.20	<0.20	<0.20	NC
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20[R]	<0.20	NC
Barium, ICPES	1.8	1.2	1.1	1.4	28	1.5	1.5	0.97	1.3	23
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	0.0060	<0.0050	0.0070	0.0052	46	<0.0050	<0.0050	<0.0050[R]	<0.0050	NC
Calcium, ICPES	13	4.0	9.9	9.0	51	1800	1800	1800	1800	0
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.070	0.070	0.050	0.063	18
Copper, ICPES	0.050	0.040	0.030	0.040	25	0.030	0.030	<0.020	0.023	49
Lead, ICPES	3.0	5.0	4.8	4.3	26	<0.050	<0.20	<0.050[R]	<0.20	NC
Nickel, ICPES	0.020	<0.020	<0.020	<0.020	43	<0.020	<0.020	<0.020[R]	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.30	<0.030[R]	<0.30	NC
Sodium, ICPES	1100	1000	1100	1100	5.4	15	15	10	13	22
Zinc, ICPES	0.70	0.070	0.070	0.28	130	<0.020	<0.020	<0.020[R]	<0.020	NC
Other Chemical and Physical Tests										
Eh (mV)	269	265	273	270	1.5	-28	-31	-26	-28	- 8.9
Filterable Residue (TDS) (mg/L)	4700	4300	4500	4500	4.4	8600	8600	8200	8500	2.7
Oil and grease, infrared (mg/L)	2.3	1.1	0.80	1.4	57	4.4	4.2	4.5	4.4	3.5
pH (pH units)	4.7	4.6	4.6	4.6	1.6	11.2	11.2	10.1	10.8	5.9

NA: Not Analyzed.

NC: Not Calculable.

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TABLE A.11. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

M: MS recovery not within acceptable QA/QC limits.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

†: Relative Percent Difference between % recoveries of MS and MSD are not within acceptable QA/QC limits.

TABLE A.12. TCLP LEACHATE TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (ug/L)										
Acetone	820	1100	1100	1000	16	<820	<820	<820	<820	NC
Acrolein	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Acrylonitrile	<25	<25	<25	<25	NC	<25	<25	<25	<25	NC
Benzene	4.6	11	9.0	8.2	40	<4.6	<4.6	<4.6	<4.6	NC
Bromoform	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Bromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
2-Butanone	43	<10	39	29	72	<10	<10	<10	<10	NC
Carbon Disulfide	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Carbon Tetrachloride	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chlorobenzene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chlorodibromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
2-Chloroethyl vinyl ether	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloroform	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloromethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dibromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,4-Dichloro-2-butene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dichlorobromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dichlorodifluoromethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1-Dichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,2-Dichloropropane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC

TABLE A.12. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,3-Dichloropropene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Ethyl benzene	3.7	13	10	8.9	53	<3.7	<3.7	<3.7	<3.7	NC
Ethyl methacrylate	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2-Hexanone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Iodomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
4-Methyl-2-pentanone	55	63	61	60	7.0	<55	<55	<55	<55	NC
Methylene chloride	18	23	23	21	14	<18	<18	<18	<18	NC
Styrene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1,2,2-Tetrachloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Tetrachloroethylene	<2.0	4.4	3.3	2.9	60	<2.0	<2.0	<2.0	<2.0	NC
Toluene	24	76	64	55	50	<24	<24	<24	<24	NC
1,1,1-Trichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1,2-Trichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Trichloroethene	13	37	30	27	46	<13	<13	<13	<13	NC
Trichlorofluoromethane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2,3-Trichloropropane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Vinyl Acetate	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Vinyl chloride	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Xylenes	14	88	69	57	67	<14	<14	<14	<14	NC
Semivolatile Organic Compounds (ug/L)										
Acenaphthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Acenaphthylene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Acetophenone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Aminobiphenyl	<250	<250	<250	<250	NC	<250	<250	<250	<250	NC

TABLE A.12. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Aniline	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
Anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzidine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(a)anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(a)pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(k)fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzoic acid	<10	<10	<10	<10	NC	<10	<10	10	<10	43
Benzyl alcohol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Bromophenyl phenyl ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Butyl benzyl phthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Di-n-butylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	<10	<10	NC	<20	<20	<20	<20	NC
p-Chloroaniline	<20	<20	<20	<20	NC	<10	<10	<10	<10	NC
Chlorobenzilate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroethoxy)methane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroethyl)ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroisopropyl)ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1-Chloronaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Chloronaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Chlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Chrysene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
o-Cresol	55	50	27	44	34	110	81	73	88	22

TABLE A 12 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
p-Cresol	43	38	60	47	25	500	360	160	340	50
Dibenz(a,j)acridine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Dibenzo(a,h)anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Dibenzofuran	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
3,3'-Dichlorobenzidene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
2,4-Dichlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,6-Dichlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Diethylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
p-Dimethylaminoazobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
7,12-Dimethylbenz(a)anthracene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
a,a-Dimethylphenethylamine	<25	<25	<25	<25	NC	<25	<25	<25	<25	NC
2,4-Dimethylphenol	120	99	60	93	33	180	92	120	130	34
Dimethylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4,6-Dinitro-2-Methylphenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
1,3-Dinitrobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2,4-Dinitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2,4-Dinitrotoluene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Diphenylamine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2-Diphenylhydrazine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Ethyl methanesulfonate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Ethylhexyl)phthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC

TABLE A.12 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Fluorene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorobutadiene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachloroethane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Indeno(1,2,3-c,d)pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Isophorone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Methyl methanesulfonate	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
3-Methylcholanthrene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
2-Methylnaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Naphthalene	<10	17	<10	<10	77	<10	<10	<10	<10	NC
1-Naphthylamine	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2-Naphthylamine	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
5-Nitro-o-toluidine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
3-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
4-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Nitrobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Nitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
4-Nitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodi-n-butylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodimethylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodiphenylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodipropylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC

TABLE A.12. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Di-n-octylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Pentachlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Pentachloronitrobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Pentachlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Phenacetin	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Phenanthrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Phenol	200	220	170	200	13	540	420	71	340	71
2-Picoline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Pronamide	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2,4,5-Tetrachlorobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2,3,4,6-Tetrachlorophenol	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
1,2,4-Trichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,4,5-Trichlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2,4,6-Trichlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
PCBs (ug/L)										
Aroclor-1016	<0.43	<0.43	<0.43	<0.43	NC	<0.10	<0.11	<0.10	<0.11	NC
Aroclor-1221	<0.86	<0.43	<0.43	<0.86	NC	<0.21	<0.21	<0.20	<0.21	NC
Aroclor-1232	<0.86	<0.86	<0.85	<0.86	NC	<0.21	<0.21	<0.20	<0.21	NC
Aroclor-1242	<0.43	<0.43	<0.43	<0.43	NC	<0.10	<0.11	<0.10	<0.11	NC
Aroclor-1248	<0.43	<0.43	<0.43	<0.43	NC	<0.10	<0.11	<0.10	<0.11	NC
Aroclor-1254	<0.86	<0.86	<0.85	<0.86	NC	<0.21	<0.21	<0.20	<0.21	NC
Aroclor-1260	<0.86	<0.86	<0.85	<0.86	NC	<0.21	<0.21	<0.20	<0.21	NC

TABLE A.12. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.013	0.016	0.013	0.014	12	<0.0020	<0.0020	<0.0020	<0.0020	NC
Lead, graphite AA	NA	NA	NA	NC	NC	0.011	0.016		0.014	26
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00030	<0.00030	NC
Selenium, graphite AA	<0.0050	<0.0040	<0.0040	<0.0050	NC	<0.0050	<0.0050	<0.0050[R]	<0.0050	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	<0.0020[R]	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.33	0.30	0.20	0.28	25	0.50	0.40	0.50	0.47	12
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	1.8	3.3	2.5	2.5	30	5.1	5.2	5.0	5.1	2.0
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	0.0080	0.010	0.010	0.0093	12	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	19	23	21	21	9.5	1800	1800	2000	1900	6.2
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	0.030	<0.030	43
Copper, ICPES	0.030	0.030	<0.020	0.023	49	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	3.6	7.2	5.3	5.4	34	<0.050	<0.050	<0.050[R]	<0.050	NC
Nickel, ICPES	0.020	0.030	0.030	0.027	22	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	1000	1200	1300	1200	13	42	45	43	43	3.5
Zinc, ICPES	0.89	1.8	1.1	1.3	38	0.020	<0.020	<0.020	<0.020	43
Other Chemical and Physical Tests										
Eh (mV)	208	201	209	210	2.1	-31	-32	-41	-35	-16
Filterable Residue (TDS) (mg/L)	4900	5400	5300	5200	5.1	8700	8300	8800	8600	3.1
Oil and grease, infrared (mg/L)	1.7	1.9	1.2	1.6	23	2.5	2.9	1.7	2.4	26
pH (pH units)	4.7	4.8	4.8	4.8	1.8	11.6	11.6	11.7	11.6	0.4

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

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TABLE A 13 TCLP LEACHATE TEST RESULTS FOR OFF SITE AREA ONE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Volatile Organic Compounds (ug/L)										
Acetone	160	240	200	200	20	<160	<160	<160	<160	NC
Acrolein	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Acrylonitrile	<25	<25	<25	<25	NC	<25	<25	<25	<25	NC
Benzene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Bromoform	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Bromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
2-Butanone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Carbon Disulfide	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Carbon Tetrachloride	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chlorobenzene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chlorodibromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
2-Chloroethyl vinyl ether	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloroform	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Chloromethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dibromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,4-Dichloro-2-butene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dichlorobromomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Dichlorodifluoromethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1-Dichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,2-Dichloropropane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC

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TABLE A.13 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
cis-1,3-Dichloropropene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
trans-1,3-Dichloropropene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Ethyl benzene	3.0	8.2	3.0	4.7	63	<3.0	<3.0	<3.0	<3.0	NC
Ethyl methacrylate	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2-Hexanone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Iodomethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
4-Methyl-2-pentanone	8.4	1100	14	370	168	<8.4	<8.4	<8.4	<8.4	NC
Methylene chloride	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Styrene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1,2,2-Tetrachloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Tetrachloroethylene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Toluene	130	570	110	270	96	<110	<110	<110	<110	NC
1,1,1-Trichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
1,1,2-Trichloroethane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Trichloroethene	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Trichlorofluoromethane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2,3-Trichloropropane	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Vinyl Acetate	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Vinyl chloride	<2.0	<2.0	<2.0	<2.0	NC	<2.0	<2.0	<2.0	<2.0	NC
Xylenes	8.4	61	8.2	26	118	<8.2	<8.2	<8.2	<8.2	NC
Semivolatile Organic Compounds (ug/L)										
Acenaphthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Acenaphthylene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Acetophenone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Aminobiphenyl	<250	<250	<250	<250	NC	<250	<250	<250	<250	NC

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TABLE A.13. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Aniline	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
Anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzidine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(a)anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(a)pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzo(k)fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzoic acid	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Benzyl alcohol	61	56	54	57	6.3	13	94	110	72	72
4-Bromophenyl phenyl ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Butyl benzyl phthalate	29	40	38	36	16	<10	<10	<10	<10	NC
Di-n-butylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
p-Chloroaniline	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
Chlorobenzilate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroethoxy)methane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroethyl)ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Chloroisopropyl)ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1-Chloronaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Chloronaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Chlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Chrysene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
o-Cresol	36	14	<10	18	87	15	13	11	13	15

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TABLE A.13 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
p-Cresol	<10	11	<10	<10	49	100	130	92	110	19
Dibenz(a,j)acridine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Dibenzo(a,h)anthracene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Dibenzofuran	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
3,3'-Dichlorobenzidene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
2,4-Dichlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,6-Dichlorophenol	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Diethylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
p-Dimethylaminoazobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
7,12-Dimethylbenz(a)anthracene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
a,a-Dimethylphenethylamine	<25	<25	<25	<25	NC	<25	<25	<25	<25	NC
2,4-Dimethylphenol	<10	16	10	10	53	37	29	13	26	46
Dimethylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
4,6-Dinitro-2-Methylphenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
1,3-Dinitrobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2,4-Dinitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2,4-Dinitrotoluene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Diphenylamine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2-Diphenylhydrazine	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Ethyl methanesulfonate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
bis(2-Ethylhexyl)phthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC

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TABLE A.13. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Fluoranthene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Fluorene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorobutadiene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Hexachloroethane	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Indeno(1,2,3-c,d)pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Isophorone	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Methyl methanesulfonate	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
3-Methylcholanthrene	<20	<20	<20	<20	NC	<20	<20	<20	<20	NC
2-Methylnaphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Naphthalene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1-Naphthylamine	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2-Naphthylamine	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
5-Nitro-o-toluidine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
3-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
4-Nitroaniline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Nitrobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2-Nitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
4-Nitrophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodi-n-butylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodimethylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodiphenylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
N-Nitrosodipropylamine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC

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TABLE A.13. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
N-Nitrosopiperidine	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Di-n-octylphthalate	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Pentachlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Pentachloronitrobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Pentachlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Phenacetin	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Phenanthrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
Phenol	<10	12	<10	<10	55	110	100	100	100	5.6
2-Picoline	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
Pronamide	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
Pyrene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
1,2,4,5-Tetrachlorobenzene	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
2,3,4,6-Tetrachlorophenol	<100	<100	<100	<100	NC	<100	<100	<100	<100	NC
1,2,4-Trichlorobenzene	<10	<10	<10	<10	NC	<10	<10	<10	<10	NC
2,4,5-Trichlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
2,4,6-Trichlorophenol	<50	<50	<50	<50	NC	<50	<50	<50	<50	NC
PCBs (ug/L)										
Aroclor-1016	<0.42	<0.42	<0.42	<0.42	NC	<0.40	<0.44	<0.44	<0.44	NC
Aroclor-1221	<0.42	<0.42	<0.42	<0.42	NC	<0.80	<0.87	<0.87	<0.87	NC
Aroclor-1232	<0.83	<0.84	<0.83	<0.84	NC	<0.80	<0.87	<0.87	<0.87	NC
Aroclor-1242	<0.42	<0.42	<0.42	<0.42	NC	<0.40	<0.44	<0.44	<0.44	NC
Aroclor-1248	<0.42	<0.42	<0.42	<0.42	NC	<0.40	<0.44	<0.44	<0.44	NC
Aroclor-1254	<0.83	<0.84	<0.83	<0.84	NC	<0.80	<0.87	<0.87	<0.87	NC
Aroclor-1260	<0.83	<0.84	<0.83	<0.84	NC	<0.80	<0.87	<0.87	<0.87	NC

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TABLE A.13. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.19[R]	0.17	0.20	0.19	8.2	0.016	0.019	0.017	0.017	8.8
Lead, graphite AA	0.70[B]	0.45	0.50	0.55	24	0.0060	0.010	0.020	0.012	60
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0050[R]	<0.0050	<0.0050	<0.0050	NC	<0.0050	<0.0050	<0.0050	<0.0050	NC
Thallium, graphite AA	<0.0010[R]	<0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.60	0.60	0.60	0.60	0	0.40	0.40	0.40	0.40	0.0
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	1.5[R]	2.0	1.4	1.6	20	2.2	2.3	2.4	2.3	4.3
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	150	240	190	190	23	1900	1800	1900	1900	3.1
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.040	0.040	0.040	0.040	0
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	0.030	0.070	0.037	83
Lead, ICPES	0.49	0.41	0.47	0.46	9.1	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	0.020	0.040	0.040	0.033	35	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	1200	1200	1200	1200	0	15	15	17	16	7.4
Zinc, ICPES	0.57[R]	0.81	0.51	0.63	25	0.020	<0.020	<0.020	<0.020	43
Other Chemical and Physical Tests										
Eh (mV)	197	184	184	190	3.8	-54	-57	-59	-57	4.4
Filterable Residue (TDS) (mg/L)	6100	6500	6200	6300	3.3	9100	8700	9100	9000	2.6
Oil and grease, infrared (mg/L)	2.2	2.6	1.0	1.9	43	12	12	12	12	0
pH (pH units)	5.0	5.2	5.1	5.1	1.9	11.5	11.6	11.5	11.5	0.3

NA: Not Analyzed.

NC: Not Calculable.

TABLE A.13. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

B: Detected in reagent blank; background subtraction not done.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

TABLE A.14. EP LEACHATE TEST RESULTS FOR REAGENT MIX

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1221	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1232	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1242	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1248	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1254	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1260	<0.040	<0.040	<0.040	<0.040	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0020	0.0020	<0.0020	<0.0020	35
Lead, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	0.010	0.020	0.020	0.017	35
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.40	0.70	0.50	35
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	4.4	4.2	4.3	4.3	2.3
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	1900	1900	1900	1900	0
Chromium, ICPES	0.070	0.070	0.060	0.067	8.7
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	33	36	35	35	4.4

TABLE A.14. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Other Chemical and Physical Tests					
Eh (mV)	6.0	14	7.0	9.0	48
Filterable Residue (TDS) (mg/L)	8700	8500	8800	8700	1.8
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
pH (pH units)	11.4	11.1	11.4	11.3	1.5

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.15. EP LEACHATE TEST RESULTS FOR FILTER CAKE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.43	<0.22	<0.42	<0.43	NC	<0.40	<0.40	<0.41	<0.41	NC
Aroclor-1221	<0.43	<0.22	<0.42	<0.43	NC	<0.80	<0.80	<0.82	<0.82	NC
Aroclor-1232	<0.86	<0.43	<0.85	<0.86	NC	<0.80	<0.80	<0.82	<0.82	NC
Aroclor-1242	<0.43	<0.22	<0.42	<0.43	NC	<0.40	<0.40	<0.41	<0.41	NC
Aroclor-1248	<0.43	<0.22	<0.42	<0.43	NC	<0.40	<0.40	<0.41	<0.41	NC
Aroclor-1254	<0.86	<0.43	<0.85	<0.86	NC	<0.80	<0.80	<0.82	<0.82	NC
Aroclor-1260	<0.86	<0.43	<0.85	<0.86	NC	<0.80	<0.80	<0.82	<0.82	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.017	0.0060	0.0080	0.010	57	0.0020	0.0020[R]	0.0030	0.0023	25
Lead, graphite AA	0.21	0.26	0.30	0.26	18	0.0050	<0.0020	<0.0020	0.0023	99
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC	0.0050	<0.0040[R]	<0.0040	<0.0040	58
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010[R]	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.31	<0.20	<0.20	<0.20	71	<0.20	<0.20	<0.20	<0.20	NC
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.12	0.32	0.18	0.21	50	1.5	1.4	1.2	1.4	11
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0050	<0.0050[R]	<0.0050	<0.0050	NC
Calcium, ICPES	8.4	1.6	4.5	4.8	71	2100	2000	2000	2000	2.8
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.080	0.080	0.090	0.083	6.9
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	0.040	0.030	0.040	0.037	16
Lead, ICPES	0.22	0.26	0.28	0.25	12	<0.050	<0.050[R]	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	1.6	1.1	1.5	1.4	19	17	15	13	15	13

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TABLE A.15. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Zinc, ICPES	0.062	<0.020	0.023	0.032	85	<0.020	<0.020[R]	<0.020	<0.020	NC
Other Chemical and Physical Tests										
Eh (mV)	284	330	345	320	10	-4.0	-8.0	6.0	-2.0	-361
Filterable Residue (TDS) (mg/L)	130	70	70	90	38	9500	9300	9700	9500	2.1
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC	4.0	3.7	4.2	4.0	6.3
pH (pH units)	3.8	3.8	3.8	3.8	1.1	11.1	11.0	10.5	10.9	3.2

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

TABLE A.16. EP LEACHATE TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.43	<0.43	<0.43	<0.43	NC	<0.40	<0.42	<0.030	<0.42	NC
Aroclor-1221	<0.43	<0.43	<0.43	<0.43	NC	<0.80	<0.84	<0.060	<0.84	NC
Aroclor-1232	<0.86	<0.86	<0.85	<0.86	NC	<0.80	<0.84	<0.060	<0.84	NC
Aroclor-1242	<0.43	<0.43	<0.43	<0.43	NC	<0.40	<0.42	<0.030	<0.42	NC
Aroclor-1248	<0.43	<0.43	<0.43	<0.43	NC	<0.40	<0.42	<0.030	<0.42	NC
Aroclor-1254	<0.86	<0.86	<0.85	<0.86	NC	<0.80	<0.84	<0.060	<0.84	NC
Aroclor-1260	<0.86	<0.86	<0.85	<0.86	NC	<0.80	<0.84	<0.060	<0.84	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.010	0.010	0.013	0.011	16	<0.0020	0.0030	0.0020	0.0020	50
Lead, graphite AA	0.74	0.35	0.57	0.55	35	0.020[M]	0.015	0.010	0.015	33
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC	<0.0020	<0.0050	<0.0050	<0.0050	NC
Thallium, graphite AA	<0.0010	<0.0010	0.0030	0.0013	108	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	0.30	<0.20	69
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	1.5	0.56	1.3	1.1	44	7.8	4.0	5.2	5.7	34
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	0.0020	<0.0020	<0.0020	43
Cadmium, ICPES	0.011	<0.0050	0.011	0.0082	60	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	14	8.7	9.1	11	28	2100	2100	2000	2100	2.8
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.040	0.040	0.030	0.037	16
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	0.72	0.33	0.50	0.52	38	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	65	47	63	58	17	43	47	45	45	4.4

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TABLE A.16 (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Zinc, ICPES	1.2	0.37	1.0	0.86	51	<0.020	<0.020	<0.020	<0.020	NC
Other Chemical and Physical Tests										
Eh (mV)	225	210	211	220	4.0	-50	-19	-20	-30	-59
Filterable Residue (TDS) (mg/L)	380	270	330	330	17	8900	9100	9400	9100	2.8
Oil and grease, infrared (mg/L)	<0.40	<0.40	0.70	<0.40	79	2.5	2.2	4.6	3.1	42
pH (pH units)	4.6	4.8	4.9	4.8	3.0	11.9	11.8	11.8	11.8	0.4

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

M: MS recovery not within acceptable QA/QC limits.

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TABLE A.17. EP LEACHATE TEST RESULTS FOR OFF-SITE AREA ONE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.42	<0.42	<0.45	<0.45	NC	<0.020	<0.21	<0.21	<0.21	NC
Aroclor-1221	<0.42	<0.42	<0.45	<0.45	NC	<0.040	<0.42	<0.42	<0.42	NC
Aroclor-1232	<0.84	<0.84	<0.90	<0.90	NC	<0.040	<0.42	<0.42	<0.42	NC
Aroclor-1242	<0.42	<0.42	<0.45	<0.45	NC	<0.020	<0.21	<0.21	<0.21	NC
Aroclor-1248	<0.42	<0.42	<0.45	<0.45	NC	<0.020	<0.21	<0.21	<0.21	NC
Aroclor-1254	<0.84	<0.84	<0.90	<0.90	NC	<0.040	<0.42	<0.42	<0.42	NC
Aroclor-1260	<0.84	<0.84	<0.90	<0.90	NC	<0.040	<0.42	<0.42	<0.42	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.16	0.18[R]	0.20	0.18	11	0.028	0.031	0.024	0.028	13
Lead, graphite AA	0.027	0.23	0.10	0.12	86	0.016	0.015	0.0050	0.012	51
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00030	<0.00020	<0.00030	NC
Selenium, graphite AA	<0.0040	<0.0040[R]	<0.0040	<0.0040	NC	<0.0050	<0.0050[R]	<0.0050	<0.0050	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010[R+]	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.25	0.67	0.29	0.40	57	<0.20	0.30	0.20	0.20	50
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.37	0.83	0.53	0.58	40	2.9	2.6	1.6	2.4	29
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	0.0070	0.0060	0.0052	46	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	67	230	110	140	62	2100	2100	2000	2100	2.8
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.030	0.040	<0.030	<0.030	44
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	0.050	0.070	0.060	0.060	17
Lead, ICPES	<0.050	0.15	<0.050	0.067	108	<0.050	<0.050[R]	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	1.9	2.4	2.1	2.1	12	17	16	16	16	3.5

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TABLE A.17. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Zinc, ICPES	0.14	0.48[E]	0.15	0.26	75	<0.020	<0.020[R]	0.020	<0.020	43
Other Chemical and Physical Tests										
Eh (mV)	61	127	192	130	52	-10	-16	-5.0	-10	-53
Filterable Residue (TDS) (mg/L)	410	1300	650	790	59	9700	9700	8900	9400	4.9
Oil and grease, infrared (mg/L)	<0.40	7.5	<0.40	2.6	160	12	12	9.8	11	11
pH (pH units)	4.8	4.6	5.0	4.8	4.5	11.7	11.7	11.6	11.7	0.5

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

E: Reported value is estimated due to the presence of a matrix interference.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

+: Relative Percent Difference between % recoveries of MS and MSD are not within acceptable QA/QC limits.

TABLE A 18. BET LEACHATE (1:4) TEST RESULTS FOR REAGENT MIX

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1221	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1232	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1242	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1248	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1254	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1260	<0.22	<0.22	<0.22	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0030	0.0030	0.0030	0.0030	0.0
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.40	0.30	0.37	16
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	31	25	26	27	12
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	290	680	650	540	40
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	180	150	160	160	9.4
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A 18. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-60	-82	-64	-69	- 17
Filterable Residue (TDS) (mg/L)	3100	2800	2800	2900	6.0
Oil and grease, infrared (mg/L)	<0.50	<0.50	<0.40	<0.50	NC
Total organic carbon (mg/L)	39	34	36	36	6.9
pH (pH units)	12.1	12.1	12.0	12.0	0.5

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A.19. BET LEACHATE (1:20) TEST RESULTS FOR REAGENT MIX

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1221	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1232	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1242	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1248	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1254	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1260	<0.22	<0.20	<0.20	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0040	0.0030	0.0040	0.0037	16
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	1.6	1.3	2.4	1.8	32
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	9.8	12	8.5	10	18
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	570	600	500	560	9.2
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	38	46	34	39	16
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.19. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-81	-84	-75	-80	- 5.7
Filterable Residue (TDS) (mg/L)	1700	1900	1500	1700	12
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.50	<0.50	NC
Total organic carbon (mg/L)	10	11	8.0	9.7	16
pH (pH units)	12.0	12.0	12.0	12.0	0.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A.20. BET LEACHATE (1:100) TEST RESULTS FOR REAGENT MIX

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1221	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1232	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1242	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1248	<0.11	<0.10	<0.10	<0.11	NC
Aroclor-1254	<0.22	<0.20	<0.20	<0.22	NC
Aroclor-1260	<0.22	<0.20	<0.20	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0080	0.0060	0.0080	0.0073	16
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	5.0	4.8	4.7	4.8	3.2
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	1.7	1.6	1.6	1.6	3.5
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	220	210	210	210	2.7
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	9.3	8.8	9.0	9.0	2.8
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.20. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-71	-75	-68	-71	- 4.9
Filterable Residue (TDS) (mg/L)	640	610	610	620	2.8
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	3.0	3.0	3.0	3.0	0
pH (pH units)	11.8	11.8	11.8	11.8	0.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A 21. BET LEACHATE (1:4) TEST RESULTS FOR FILTER CAKE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.41	<0.20	<0.42	<0.42	NC	<0.22	<0.20	<0.43	<0.43	NC
Aroclor-1221	<0.41	<0.20	<0.42	<0.42	NC	<0.44	<0.40	<0.86	<0.86	NC
Aroclor-1232	<0.82	<0.40	<0.84	<0.84	NC	<0.44	<0.40	<0.86	<0.86	NC
Aroclor-1242	<0.41	<0.20	<0.42	<0.42	NC	<0.22	<0.20	<0.43	<0.43	NC
Aroclor-1248	<0.41	<0.20	<0.42	<0.42	NC	<0.22	<0.20	<0.43	<0.43	NC
Aroclor-1254	<0.82	<0.40	<0.84	<0.84	NC	<0.44	<0.40	<0.86	<0.86	NC
Aroclor-1260	<0.82	<0.40	<0.84	<0.84	NC	<0.44	<0.40	<0.86	<0.86	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.17	0.017	0.028	0.072	119	0.012	0.010	0.011	0.011	9.1
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00010	<0.00010	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0050	<0.0050	NC	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0020	<0.0020	NC	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	3.9	0.80	0.90	1.9	94	<0.20	<0.20	0.40	0.20	87
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.091	0.22	0.095	0.14	54	6.2	7.4	5.2	6.3	18
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	0.017	<0.0050	<0.0050	0.0073	114	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	59	5.4	26	30	90	940	870	740	850	12
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.049	0.040	0.050	0.046	12
Copper, ICPES	0.080	0.040	0.030	0.050	53	0.060	0.050	0.080	0.063	24
Lead, ICPES	1.2	0.85	0.55	0.87	38	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	0.10	0.040	0.050	0.063	51	<0.020	<0.020	0.030	<0.020	69
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	4.0	1.0	2.0	2.3	65	99	87	67	84	19
Zinc, ICPES	0.65	0.10	0.070	0.27	119	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.21. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	271	240	293	270	9.9	-70	-80	-97	-82	-17
Filterable Residue (TDS) (mg/L)	680	220	430	440	52	4700	3900	2900	3800	24
Oil and grease, infrared (mg/L)	1.5	<0.40	<0.50	0.65	113	7.0	5.6	6.2	6.3	11
Total organic carbon (mg/L)	180	33	61	91	85	150	130	140	140	7.1
pH (pH units)	3.3	4.3	3.4	3.7	14	11.7	11.7	11.7	11.7	0.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A 22. BET LEACHATE (1:20) TEST RESULTS FOR FILTER CAKE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.41	<0.21	<0.21	<0.41	NC	<0.10	<0.40	<0.41	<0.41	NC
Aroclor-1221	<0.41	<0.21	<0.21	<0.41	NC	<0.20	<0.80	<0.82	<0.82	NC
Aroclor-1232	<0.82	<0.42	<0.42	<0.82	NC	<0.20	<0.80	<0.82	<0.82	NC
Aroclor-1242	<0.41	<0.21	<0.21	<0.41	NC	<0.10	<0.40	<0.41	<0.41	NC
Aroclor-1248	<0.41	<0.21	<0.21	<0.41	NC	<0.10	<0.40	<0.41	<0.41	NC
Aroclor-1254	<0.82	<0.42	<0.42	<0.82	NC	<0.20	<0.80	<0.82	<0.82	NC
Aroclor-1260	<0.82	<0.42	<0.42	<0.82	NC	<0.20	<0.80	<0.82	<0.82	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.026	0.0070	0.010	0.014	71	0.0030	0.0030[R]	0.0050	0.0037	31
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00030[R]	<0.00020	<0.00020	<0.00030	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0050	<0.0050	NC	<0.0040	<0.0040[R]	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0020	<0.0020	NC	<0.0010[R+]	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.40	0.20	<0.20	0.23	65	0.30	0.40	0.70	0.47	45
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20[R]	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.21	0.36	0.26	0.28	28	3.4	4.4	2.3	3.4	51
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	14	2.0	5.9	7.3	84	490	560	390	480	18
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	0.040	0.030	0.040	0.037	16
Copper, ICPES	0.030	<0.020	<0.020	<0.020	69	0.020	0.030	0.030	0.027	22
Lead, ICPES	0.52	0.25	0.50	0.42	36	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	0.020	<0.020	43	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	1.5	<1.0	<1.0	<1.0	69	22	20	15	19	19
Zinc, ICPES	0.10	0.030	<0.020	0.047	101	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.22. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	250	301	305	290	11	-75	-98	-102.0	-92	- 16
Filterable Residue (TDS) (mg/L)	170	86	100	120	38	1900	1800	1400	1700	16
Oil and grease, infrared (mg/L)	1.2	<0.40	<0.40	0.53	108	2.5	2.7	2.8	2.7	5.7
Total organic carbon (mg/L)	40	25	18	28	41	46	42	42	43	5.3
pH (pH units)	3.6	3.4	3.7	3.5	3.9	11.6	11.7	11.7	11.7	0.5

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

†: Relative Percent Difference between % recoveries of MS and MSD are not within acceptable QA/QC limits.

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TABLE A.23. BET LEACHATE (1:100) TEST RESULTS FOR FILTER CAKE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.21	<0.42	<0.10	<0.42	NC	<0.020	<0.21	<0.20	<0.21	NC
Aroclor-1221	<0.21	<0.42	<0.20	<0.42	NC	<0.040	<0.42	<0.40	<0.42	NC
Aroclor-1232	<0.42	<0.84	<0.20	<0.84	NC	<0.040	<0.42	<0.40	<0.42	NC
Aroclor-1242	<0.21	<0.42	<0.10	<0.42	NC	<0.020	<0.21	<0.20	<0.21	NC
Aroclor-1248	<0.21	<0.42	<0.10	<0.42	NC	<0.020	<0.21	<0.20	<0.21	NC
Aroclor-1254	<0.42	<0.84	<0.20	<0.84	NC	<0.040	<0.42	<0.40	<0.42	NC
Aroclor-1260	<0.42	<0.84	<0.20	<0.84	NC	<0.040	<0.42	<0.40	<0.42	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.056	<0.0020	0.0030	0.020	156	<0.0020	0.0030	0.0020	0.0020	50
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00010	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0050	<0.0050	<0.0050	NC	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0010	<0.0020	0.0020	<0.0020	65	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	<0.20	1.0	<0.020[R]	0.37	148	1.1	1.3	1.0	1.1	13
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.30	0.74	0.38	0.47	50	0.97	1.2	0.59	0.92	33
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050[R]	<0.0050	NC	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	2.0	<1.0	1.1	1.2	63	230	260	190	230	15
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020[R]	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	0.10	0.20	0.23[R]	0.18	39	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.920	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030[R]	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	<1.0	<1.0	<1.0[R]	<1.0	NC	5.0	4.0	4.0	4.3	13
Zinc, ICPES	0.040	<0.020	<0.020	0.026	87	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.23. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	190	302	304	270	25	-68	-93	-84	-82	-16
Filterable Residue (TDS) (mg/L)	50	30	40	40	25	810	840	620	760	16
Oil and grease, infrared (mg/L)	0.60	<0.40	<0.40	<0.40	69	<0.40	<0.40	0.40	<0.40	43
Total organic carbon (mg/L)	14	7.0	13	11	33	17	12	12	14	21
pH (pH units)	4.2	3.6	3.8	3.9	7.3	11.4	11.7	11.5	11.5	1.2

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

TABLE A 24. BET LEACHATE (1:4) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<1.0	<1.0	<1.1	<1.1	NC	<0.40	<0.40	<0.42	<0.42	NC
Aroclor-1221	<2.1	<2.0	<2.2	<2.2	NC	<0.80	<0.80	<0.84	<0.84	NC
Aroclor-1232	<2.1	<2.0	<2.2	<2.2	NC	<0.80	<0.80	<0.84	<0.84	NC
Aroclor-1242	<1.0	<1.0	<1.1	<1.1	NC	<0.40	<0.40	<0.42	<0.42	NC
Aroclor-1248	<1.0	<1.0	<1.1	<1.1	NC	<0.40	<0.40	<0.42	<0.42	NC
Aroclor-1254	<2.1	<2.0	<2.2	<2.2	NC	<0.80	<0.80	<0.84	<0.84	NC
Aroclor-1260	<2.1	<2.0	<2.2	<2.2	NC	<0.80	<0.80	<0.84	<0.84	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.061	0.063	<0.0020	0.042	85	0.0080	0.0080	0.0080	0.0080	0
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	0.0030	<0.0020	<0.0020	<0.0020	69	<0.0010	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.37	0.62	<0.20	0.36	72	0.30	0.20	0.20	0.23	25
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	1.4	0.79	0.31	0.83	66	19	17	15	17	12
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	0.048	0.057	<0.0050	0.036	82	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	58	73	1.0	44	86	800	720	660	730	9.7
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	0.030	0.030	0.030	0.030	0
Lead, ICPES	2.4	2.5	0.11	1.7	81	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	0.060	0.077	<0.020	0.049	71	0.030	<0.020	0.030	0.023	49
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	320	360	<1.0	230	87	260	240	250	250	4.0
Zinc, ICPES	4.0	4.1	<0.020	2.7	86	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.24. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	243	246	233	240	2.8	-130.0	-96	-76	-101	- 27
Filterable Residue (TDS) (mg/L)	2100	1200	2000	1800	28	3600	3200	3600	3500	6.7
Oil and grease, infrared (mg/L)	3.3	3.0	3.3	3.2	5.4	5.7	3.4	5.6	4.9	27
Total organic carbon (mg/L)	190	220	180	200	11	120	100	110	110	9.1
pH (pH units)	3.9	3.5	3.9	3.7	5.7	12.0	11.8	12.1	12.0	1.5

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.25. BET LEACHATE (1:20) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.40	<0.41	<0.44	<0.44	NC	<0.20	<0.42	<0.21	<0.42	NC
Aroclor-1221	<0.80	<0.82	<0.88	<0.88	NC	<0.40	<0.84	<0.42	<0.84	NC
Aroclor-1232	<0.80	<0.82	<0.88	<0.88	NC	<0.40	<0.84	<0.42	<0.84	NC
Aroclor-1242	<0.40	<0.41	<0.44	<0.44	NC	<0.20	<0.42	<0.21	<0.42	NC
Aroclor-1248	<0.40	<0.41	<0.44	<0.44	NC	<0.20	<0.42	<0.21	<0.42	NC
Aroclor-1254	<0.80	<0.82	<0.88	<0.88	NC	<0.40	<0.84	<0.42	<0.84	NC
Aroclor-1260	<0.80	<0.82	<0.88	<0.88	NC	<0.40	<0.84	<0.42	<0.84	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.036	0.034	0.036	0.035	3.3	0.0020	0.0020	0.0030	0.0023	25
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00030	<0.00030	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0040	<0.0040	<0.0040[H]	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	<0.20	<0.20	<0.20	<0.20	NC	0.50	0.40	0.40	0.43	13
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.57	0.93	0.84	0.78	24	10	9.8	9.1	9.6	4.9
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	0.0090	0.0070	0.0062	54	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	8.6	10	8.8	9.1	8.3	790	790	670	750	9.2
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	0.040	0.020	<0.020	0.023	65
Lead, ICPES	0.40	0.48	0.40	0.43	11	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	0.020	<0.020	0.055	0.028	83	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	79	84	76	80	5.1	57	55	63	58	7.1
Zinc, ICPES	0.58	0.84	0.66	0.69	19	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.25. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	223	216	218	220	1.6	-105.0	-108.0	-84	-99	- 13
Filterable Residue (TDS) (mg/L)	460	500	440	470	6.5	2300	2300	2300	2300	0
Oil and grease, infrared (mg/L)	2.1	2.4	2.2	2.2	6.8	0.60	0.50	2.8	1.3	100
Total organic carbon (mg/L)	62	61	56	60	5.4	32	30	35	32	7.8
pH (pH units)	4.2	4.3	4.2	4.2	0.7	11.9	11.9	12.1	11.9	0.9

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

M: MS recovery not within acceptable QA/QC limits.

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TABLE A.26. BET LEACHATE (1:100) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.21	<0.21	<0.41	<0.41	NC	<0.10	<0.20	<0.22	<0.22	NC
Aroclor-1221	<0.42	<0.42	<0.82	<0.82	NC	<0.20	<0.40	<0.44	<0.44	NC
Aroclor-1232	<0.42	<0.42	<0.82	<0.82	NC	<0.20	<0.40	<0.44	<0.44	NC
Aroclor-1242	<0.21	<0.21	<0.41	<0.41	NC	<0.10	<0.20	<0.22	<0.22	NC
Aroclor-1248	<0.21	<0.21	<0.41	<0.41	NC	<0.10	<0.20	<0.22	<0.22	NC
Aroclor-1254	<0.42	<0.42	<0.82	<0.82	NC	<0.20	<0.40	<0.44	<0.44	NC
Aroclor-1260	<0.42	<0.42	<0.82	<0.82	NC	<0.20	<0.40	<0.44	<0.44	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.0090	0.0080	0.0080	0.0083	6.9	0.0020	0.0030	0.0040	0.0030	33
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	<0.20	<0.20	<0.20	<0.20	NC	1.2	1.4	1.4	1.3	8.7
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.46	0.51	0.48	0.48	5.2	2.7	2.5	2.5	2.6	4.5
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	2.2	2.1	2.0	2.1	4.8	440	430	440	440	1.3
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	0.16	0.14	0.12	0.14	14	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	0.047	<0.020	0.022	96	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	17[E]	17	16	17	3.5	12	12	15	13	13
Zinc, ICPES	0.16	0.19	0.14	0.16	15	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.26. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	224	214	214	220	2.7	-105.0	-95	-78	-93	- 15
Filterable Residue (TDS) (mg/L)	99	130	100	110	16	1200	1200	1200	1200	0
Oil and grease, infrared (mg/L)	1.2	1.6	1.2	1.3	17	<0.40	<0.40	0.90	0.43	93
Total organic carbon (mg/L)	23	22	18	21	13	8.0	8.0	8.0	8.0	0
pH (pH units)	4.4	4.4	4.3	4.4	1.2	11.8	11.6	11.9	11.8	1.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

E: Reported value is estimated due to the presence of a matrix interference.

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TABLE A.27. BET LEACHATE (1:4) TEST RESULTS FOR OFF-SITE AREA ONE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<1.1	<1.1	<1.0	<1.1	NC	<0.43	<0.43	<0.42	<0.43	NC
Aroclor-1221	<1.1	<1.1	<1.0	<1.1	NC	<0.86	<0.86	<0.84	<0.86	NC
Aroclor-1232	<2.3	<2.2	<2.0	<2.3	NC	<0.86	<0.86	<0.84	<0.86	NC
Aroclor-1242	<1.1	<1.1	<1.0	<1.1	NC	<0.43	<0.43	<0.42	<0.43	NC
Aroclor-1248	<1.1	<1.1	<1.0	<1	NC	<0.43	<0.43	<0.42	<0.43	NC
Aroclor-1254	<2.3	<2.2	<2.0	<2.3	NC	<0.86	<0.86	<0.84	<0.86	NC
Aroclor-1260	<2.3	<2.2	<2.0	<2.3	NC	<0.86	<0.86	<0.84	<0.86	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.36	0.45	0.33	0.38	16	0.067	0.068	0.067	0.067	0.9
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC	0.0090	0.010	<0.0040	0.0070	62
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0020	<0.0020	<0.0010	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.10	0.12	0.11	0.11	9.1	9.7	9.7	9.7	9.7	0
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	0.0080	0.010	<0.0050	0.0068	57	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	130	170	140	150	14	1100	1100	930	1000	9.4
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	0.040	<0.030	<0.030	62
Copper, ICPES	<0.020	<0.020	0.020	<0.020	43	0.16	0.17	0.17	0.17	3.5
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	0.030	<0.020	<0.020	69	0.030	0.040	0.030	0.033	17
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	5.3	5.7	4.0	5.0	18	81	81	79	80	1.4
Zinc, ICPES	0.023	<0.020	0.020	<0.020	39	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.27. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	160	112	63	110	43	-83	-78	-70	-77	- 8.5
Filterable Residue (TDS) (mg/L)	950	1200	1100	1100	12	4700	4700	4400	4600	3.8
Oil and grease, infrared (mg/L)	34	9.0^	5.0	16	98	31	28	18	26	27
Total organic carbon (mg/L)	190	200	170	190	8.2	170	20	170	120	72
pH (pH units)	8.4	8.9	7.8	8.3	6.3	12.1	12.1	12.0	12.1	0.8

NA: Not analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

^: Relative Percent Difference of the duplicate analysis is not within acceptable QA/QC limits.

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TABLE A.28. BET LEACHATE (1:20) TEST RESULTS FOR OFF-SITE AREA ONE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<1.0	<1.1	<1.0	<1.1	NC	<0.21	<0.21	<0.20	<0.21	NC
Aroclor-1221	<1.0	<1.1	<1.0	<1.1	NC	<0.42	<0.42	<0.40	<0.42	NC
Aroclor-1232	<2.1	<2.2	<2.0	<2.2	NC	<0.42	<0.42	<0.40	<0.42	NC
Aroclor-1242	<1.0	<1.1	<1.0	<1.1	NC	<0.21	<0.21	<0.20	<0.21	NC
Aroclor-1248	<1.0	<1.1	<1.0	<1.1	NC	<0.21	<0.21	<0.20	<0.21	NC
Aroclor-1254	<2.1	<2.2	<2.0	<2.2	NC	<0.42	<0.42	<0.40	<0.42	NC
Aroclor-1260	<2.1	<2.2	<2.0	<2.2	NC	<0.42	<0.42	<0.40	<0.42	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.22	0.35	0.30	0.29	23	0.022	0.021	0.023	0.022	4.5
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00030[R]	<0.00020	<0.00030	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC	0.0080	0.0080[R]	<0.0040	0.0060	58
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0020	<0.0020[R]	<0.0010	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.23	<0.20	<0.20	<0.20	52	<0.20	<0.20	<0.20	<0.20	NC
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.054	0.048	0.040	0.047	15	5.5	5.7	5.4	5.5	2.8
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	0.0060	0.0080	<0.0050	0.0055	51	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	54	69	52	58	16	890	910	790	860	7.4
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	0.030	<0.030	<0.030	43
Copper, ICPES	<0.020	0.025	<0.020	<0.020	58	0.060	0.060	0.050	0.057	10
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC	0.10	0.070	0.10	0.090	19
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	2.8	2.9	1.0	2.2	48	18	21	17	19	11
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.28. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	178	137	140	150	15	-42	-90	-102.0	-78	- 41
Filterable Residue (TDS) (mg/L)	320	460	380	390	18	2600	2700	2600	2600	2.2
Oil and grease, infrared (mg/L)	9.8	11	14	12	19	13	14	17	15	14
Total organic carbon (mg/L)	65	69	84	73	14	54	57	52	54	4.6
pH (pH units)	7.9	9.2	8.7	8.6	7.5	12.1	12.1	12.0	12.1	0.7

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

TABLE A.29. BET LEACHATE (1:100) TEST RESULTS FOR OFF-SITE AREA ONE

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)										
Aroclor-1016	<0.43	<0.43	<0.41	<0.43	NC	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1221	<0.43	<0.43	<0.41	<0.43	NC	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1232	<0.86	<0.86	<0.82	<0.86	NC	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1242	<0.43	<0.43	<0.41	<0.43	NC	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1248	<0.43	<0.43	<0.41	<0.43	NC	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1254	<0.86	<0.86	<0.82	<0.86	NC	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1260	<0.86	<0.86	<0.82	<0.86	NC	<0.20	<0.20	<0.20	<0.20	NC
Metals (AA) (mg/L)										
Arsenic, graphite AA	0.17	0.17	0.24	0.19	21	0.0080	0.011	0.010	0.0097	16
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC	0.0070	<0.0040	<0.0040	<0.0040	79
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC	<0.0020	<0.0010	<0.0010	<0.0020	NC
Metals (ICPES) (mg/L)										
Aluminum, ICPES	0.78	0.78	0.50	0.69	24	0.80	0.90	0.80	0.83	6.9
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.031	0.019	0.020	0.023	29	1.4	1.4	1.3	1.4	4.2
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	0.0060	<0.0050	<0.0050	55	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	14	20	23	19	24	410	410	400	410	1.4
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC	0.030	0.020	<0.020	0.020	50
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	1.1	1.6	<1.0	1.1	52	4.0	4.0	4.0	4.0	0
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.29. (Continued)

	Pre-treatment					Post-treatment				
	R-1	R-2	R-3	Mean	RSD	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests										
Eh (mV)	109	117	81	100	19	-27	-35	-88	-50	- 66
Filterable Residue (TDS) (mg/L)	1[illegible]0	150	740	330	108	1200	550	1200	980	38
Oil and grease, infrared (mg/L)	2.2	3.5	7.4	4.4	62	3.7	3.2	4.3	3.7	15
Total organic carbon (mg/L)	20	24	46	30	47	14	14	13	14	4.2
pH (pH units)	8.4	9.4	9.2	9.0	6.0	11.8	11.8	11.8	11.8	0.1

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.30. ANS 16.1 LEACHATE (DAY 1) TEST RESULTS FOR FILTER CAKE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1221	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1232	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1242	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1248	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1254	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1260	<0.21	<0.21	<0.21	<0.21	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00030	<0.00020	<0.00020	<0.00030	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	0.0030	<0.0020	<0.0020	<0.0020	69
Metals (ICPES) (mg/L)					
Aluminum, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.17	0.22	0.13	0.17	26
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	56	72	60	63	13
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	0.060	<0.050	55
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	7.5	8.3	6.1	7.3	15
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.30. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-24	-22	-15	-20	- 23
Filterable Residue (TDS) (mg/L)	140	430	360	310	49
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	5.6	7.1	7.1	6.6	13
pH (pH units)	10.6	10.8	10.6	10.7	0.8

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.31. ANS 16.1 LEACHATE (DAY 3) TEST RESULTS FOR FILTER CAKE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1221	<0.21	<0.20	<0.20	<0.21	NC
Aroclor-1232	<0.21	<0.20	<0.20	<0.21	NC
Aroclor-1242	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1248	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1254	<0.21	<0.20	<0.20	<0.21	NC
Aroclor-1260	<0.21	<0.20	<0.20	<0.21	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.30	0.30	0.20	0.27	22
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.20	0.23	0.13	0.19	27
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	63	72	55	63	13
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	0.040	<0.030	<0.030	<0.030	62
Sodium, ICPES	5.6	5.9	4.0	5.2	20
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.31. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-16	-16	-14	-15	- 7.5
Filterable Residue (TDS) (mg/L)	270	310	230	270	15
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	5.4	4.0	6.3	5.2	22
pH (pH units)	10.9	11.0	10.8	10.9	0.7

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.32. ANS 16.1 LEACHATE (DAY 7) TEST RESULTS FOR FILTER CAKE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1221	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1232	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1242	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1248	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1254	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1260	<0.22	<0.22	<0.22	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00030	<0.00030	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.30	0.20	0.30	33
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.25	0.26	0.14	0.22	31
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	76	78	62	72	12
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	5.2	5.0	3.0	4.4	28
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.32. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-36	-50	-21	-36	- 41
Filterable Residue (TDS) (mg/L)	340	330	270	310	12
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.50	<0.50	NC
Total organic carbon (mg/L)	5.0	5.0	6.0	5.3	11
pH (pH units)	11.0	11.1	10.9	11.0	1.2

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.33. ANS 16.1 LEACHATE (DAY 14) TEST RESULTS FOR FILTER CAKE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1221	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1232	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1242	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1248	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1254	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1260	<0.040	<0.040	<0.040	<0.040	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.30	0.20	<0.20	<0.20	50
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.29	0.31	0.14	0.25	38
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	89	91	63	81	19
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	6.0	6.0	4.0	5.3	22
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.33. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-39	-44	-41	-41	- 6.1
Filterable Residue (TDS) (mg/L)	400	420	200	340	36
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	6.0	7.0	6.0	6.3	9.1
pH (pH units)	10.7	10.7	10.6	10.7	0.8

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.34. ANS 16.1 LEACHATE (DAY 28) TEST RESULTS FOR FILTER CAKE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.10	<0.11	<0.10	<0.11	NC
Aroclor-1221	<0.20	<0.22	<0.20	<0.22	NC
Aroclor-1232	<0.20	<0.22	<0.20	<0.22	NC
Aroclor-1242	<0.10	<0.11	<0.10	<0.11	NC
Aroclor-1248	<0.10	<0.11	<0.10	<0.11	NC
Aroclor-1254	<0.20	<0.22	<0.20	<0.22	NC
Aroclor-1260	<0.20	<0.22	<0.20	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.40	0.30	0.37	16
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.34	0.33	0.16	0.28	37
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	110	110	79	100	18
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	5.6	5.4	4.0	5.0	17
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.34. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-55	-57	-59	-57	- 3.5
Filterable Residue (TDS) (mg/L)	550	520	390	490	17
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	7.0	7.0	7.0	7.0	0
pH (pH units)	11.3	11.4	11.2	11.3	0.8

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.35. ANS 16.1 LEACHATE (DAY 1) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1221	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1232	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1242	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1248	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1254	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1260	<0.21	<0.21	<0.21	<0.21	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.30	1.0	0.57	67
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.31	0.34	0.32	0.32	4.7
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	91	99	88	93	6.1
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	16	17	19	17	8.8
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.35. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-28	-23	-20	-24	-17
Filterable Residue (TDS) (mg/L)	340	410	380	380	9.3
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	6.4	6.3	6.2	6.3	1.6
pH (pH units)	11.1	11.1	11.0	11.1	0.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.36. ANS 16.1 LEACHATE (DAY 3) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1221	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1232	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1242	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1248	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1254	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1260	<0.20	<0.20	<0.20	<0.20	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.50	0.60	0.60	0.57	10
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.33	0.36	0.35	0.35	4.4
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	92	99	95	95	3.7
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	0.10	<0.050	<0.050	<0.050	87
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	9.7	11	11	11	7.1
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.36. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-23	-22	-21	-22	-4.5
Filterable Residue (TDS) (mg/L)	290	330	310	310	6.5
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	5.0	5.0	5.9	5.3	9.8
pH (pH units)	11.1	11.1	11.1	11.1	0.1

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.37. ANS 16.1 LEACHATE (DAY 7) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.10	<0.10	<0.11	<0.11	NC
Aroclor-1221	<0.20	<0.20	<0.22	<0.22	NC
Aroclor-1232	<0.20	<0.20	<0.22	<0.22	NC
Aroclor-1242	<0.10	<0.10	<0.11	<0.11	NC
Aroclor-1248	<0.10	<0.10	<0.11	<0.11	NC
Aroclor-1254	<0.20	<0.20	<0.22	<0.22	NC
Aroclor-1260	<0.20	<0.20	<0.22	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC
Thallium, graphite AA	0.0020	<0.0020	<0.0020	<0.0020	43
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.60	0.50	0.50	0.53	11
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.36	0.38	0.37	0.37	2.7
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	100	100	95	98	2.9
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	0.090	0.070	0.040	0.067	38
Sodium, ICPES	9.9	10	9.4	9.8	3.3
Zinc, ICPES	<0.020	0.090	<0.020	0.037	126

TABLE A.37. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-38	-32	-30	-33	- 12
Filterable Residue (TDS) (mg/L)	350	350	320	340	5.1
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	5.0	6.0	5.0	5.3	11
pH (pH units)	11.2	11.2	11.2	11.2	0.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A.38. ANS 16.1 LEACHATE (DAY 14) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1221	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1232	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1242	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1248	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1254	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1260	<0.040	<0.040	<0.040	<0.040	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0010	<0.0010	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.50	0.50	0.50	0.50	0
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.36	0.41	0.40	0.39	6.8
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	92	97	89	93	4.4
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	12	12	12	12	0
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.38. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-52	-49	-54	-52	- 4.9
Filterable Residue (TDS) (mg/L)	330	380	340	350	7.6
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.50	<0.50	NC
Total organic carbon (mg/L)	5.0	5.0	6.0	5.3	11
pH (pH units)	10.9	10.9	10.9	10.9	0.2

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.39. ANS 16.1 LEACHATE (DAY 28) TEST RESULTS FOR FILTER CAKE/OILY SLUDGE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1221	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1232	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1242	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1248	<0.10	<0.10	<0.10	<0.10	NC
Aroclor-1254	<0.20	<0.20	<0.20	<0.20	NC
Aroclor-1260	<0.20	<0.20	<0.20	<0.20	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.70	0.70	0.70	0.70	0.0
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.34	0.45	0.41	0.40	14
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	84	94	85	88	6.3
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	16	16	15	16	3.7
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.39. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-69	-50	-68	-62	- 17
Filterable Residue (TDS) (mg/L)	330	360	330	340	5.1
Oil and grease, infrared (mg/L)	<0.40	<0.40	<0.40	<0.40	NC
Total organic carbon (mg/L)	6.0	6.0	6.0	6.0	0
pH (pH units)	11.3	11.2	11.3	11.3	0.3

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.40. ANS 16.1 LEACHATE (DAY 1) TEST RESULTS FOR OFF-SITE AREA ONE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1221	<0.42	<0.42	<0.42	<0.42	NC
Aroclor-1232	<0.42	<0.42	<0.42	<0.42	NC
Aroclor-1242	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1248	<0.21	<0.21	<0.21	<0.21	NC
Aroclor-1254	<0.42	<0.42	<0.42	<0.42	NC
Aroclor-1260	<0.42	<0.42	<0.42	<0.42	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0070	0.0070	0.0070	0.0070	0
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.30	<0.20	<0.20	<0.20	69
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.34	0.33	0.32	0.33	3.0
Beryllium, ICPES	0.0030	<0.0020	<0.0020	<0.0020	69
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	120	110	110	110	5.1
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	18	17	17	17	3.3
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.40. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-32	-34	-31	-32	- 4.7
Filterable Residue (TDS) (mg/L)	610	650	570	610	6.6
Oil and grease, infrared (mg/L)	1.8	1.8	2.2	1.9	12
Total organic carbon (mg/L)	13	13	12	13	4.6
pH (pH units)	11.1	11.1	11.2	11.1	0.4

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A.41. ANS 16.1 LEACHATE (DAY 3) TEST RESULTS FOR OFF-SITE AREA ONE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.20	<0.21	<0.21	<0.21	NC
Aroclor-1221	<0.40	<0.41	<0.42	<0.42	NC
Aroclor-1232	<0.40	<0.41	<0.42	<0.42	NC
Aroclor-1242	<0.20	<0.21	<0.21	<0.21	NC
Aroclor-1248	<0.20	<0.21	<0.21	<0.21	NC
Aroclor-1254	<0.40	<0.41	<0.42	<0.42	NC
Aroclor-1260	<0.40	<0.41	<0.42	<0.42	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0050	0.0060	0.0050	0.0053	11
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.30	0.30	0.30	0.30	0
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.44	0.44	0.39	0.42	6.8
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	140	130	120	130	7.7
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	11	11	11	11	0
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

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TABLE A.41. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-27	-28	-29	-28	- 3.6
Filterable Residue (TDS) (mg/L)	590	600	520	570	7.6
Oil and grease, infrared (mg/L)	1.7	1.5	1.9	1.7	12
Total organic carbon (mg/L)	10	11	11	11	5.4
pH (pH units)	11.3	11.3	11.4	11.4	0.6

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

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TABLE A.42. ANS 16.1 LEACHATE (DAY 7) TEST RESULTS FOR OFF-SITE AREA ONE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.10	<0.10	<0.11	<0.11	NC
Aroclor-1221	<0.20	<0.20	<0.22	<0.22	NC
Aroclor-1232	<0.20	<0.20	<0.22	<0.22	NC
Aroclor-1242	<0.10	<0.10	<0.11	<0.11	NC
Aroclor-1248	<0.10	<0.10	<0.11	<0.11	NC
Aroclor-1254	<0.20	<0.20	<0.22	<0.22	NC
Aroclor-1260	<0.20	<0.20	<0.22	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0060	0.0070	0.0060	0.0063	9.1
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0050	<0.0050	<0.0050	<0.0050	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.40	0.30	0.37	16
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.55	0.57	0.51	0.54	5.6
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	150	150	140	150	3.9
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	10	10	9.7	9.9	1.7
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A.42. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-40	-49	-56	-48	-17
Filterable Residue (TDS) (mg/L)	630	620	600	620	2.5
Oil and grease, infrared (mg/L)	1.7	2.1	2.0	1.9	11
Total organic carbon (mg/L)	13	13	12	13	4.6
pH (pH units)	11.4	11.4	11.4	11.4	0.4

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

TABLE A.43. ANS 16.1 LEACHATE (DAY 14) TEST RESULTS FOR OFF-SITE AREA ONE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1221	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1232	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1242	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1248	<0.020	<0.020	<0.020	<0.020	NC
Aroclor-1254	<0.040	<0.040	<0.040	<0.040	NC
Aroclor-1260	<0.040	<0.040	<0.040	<0.040	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0060	0.0060	0.0070	0.0063	9.1
Mercury	<0.00020	<0.00030	<0.00020	<0.00030	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0010	<0.0010[R]	<0.0010	<0.0010	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.40	0.40[R]	0.50	0.43	13
Antimony, ICPES	<0.20	<0.20[R]	<0.20	<0.20	NC
Barium, ICPES	0.68	0.69[R]	0.63	0.67	4.8
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050[R]	<0.0050	<0.0050	NC
Calcium, ICPES	170	170	160	170	3.5
Chromium, ICPES	<0.030	<0.030[H]	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020[R]	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050[R]	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020[R]	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030[R]	<0.030	<0.030	NC
Sodium, ICPES	11	10	11	11	5.4
Zinc, ICPES	0.030	<0.020[R]	<0.020	<0.020	69

TABLE A.43. (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-66	-67	-69	-67	- 2.3
Filterable Residue (TDS) (mg/L)	760	750	710	740	3.6
Oil and grease, infrared (mg/L)	0.80	1.0	1.5	1.1	33
Total organic carbon (mg/L)	17	15	<1.0	11	83
pH (pH units)	11.2	11.1	11.1	11.1	0.5

NA: Not Analyzed.

NC: Not Calculable.

RSD: Relative Standard Deviation (%) = Standard Deviation/Mean * 100.

M: MS recovery not within acceptable QA/QC limits.

R: Initial MS recovery not within acceptable QA/QC limits. Samples and MS/MSD pairs were reanalyzed. Results are given in Appendix B.

TABLE A.44. ANS 16.1 LEACHATE (DAY 28) TEST RESULTS FOR OFF-SITE AREA ONE

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
PCBs (ug/L)					
Aroclor-1016	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1221	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1232	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1242	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1248	<0.11	<0.11	<0.11	<0.11	NC
Aroclor-1254	<0.22	<0.22	<0.22	<0.22	NC
Aroclor-1260	<0.22	<0.22	<0.22	<0.22	NC
Metals (AA) (mg/L)					
Arsenic, graphite AA	0.0080	0.0080	0.0080	0.0080	0
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	NC
Selenium, graphite AA	<0.0040	<0.0040	<0.0040	<0.0040	NC
Thallium, graphite AA	<0.0020	<0.0020	<0.0020	<0.0020	NC
Metals (ICPES) (mg/L)					
Aluminum, ICPES	0.80	0.70	0.70	0.73	7.9
Antimony, ICPES	<0.20	<0.20	<0.20	<0.20	NC
Barium, ICPES	0.91	0.91	0.89	0.90	1.3
Beryllium, ICPES	<0.0020	<0.0020	<0.0020	<0.0020	NC
Cadmium, ICPES	<0.0050	<0.0050	<0.0050	<0.0050	NC
Calcium, ICPES	230	220	220	220	2.6
Chromium, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Copper, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Lead, ICPES	<0.050	<0.050	<0.050	<0.050	NC
Nickel, ICPES	<0.020	<0.020	<0.020	<0.020	NC
Silver, ICPES	<0.030	<0.030	<0.030	<0.030	NC
Sodium, ICPES	14	12	12	13	9.1
Zinc, ICPES	<0.020	<0.020	<0.020	<0.020	NC

TABLE A-44 (Continued)

	Post-treatment				
	R-1	R-2	R-3	Mean	RSD
Other Chemical and Physical Tests					
Eh (mV)	-78	-80	-76	-78	-2.6
Filterable Residue (TDS) (mg/L)	880	870	860	870	1.1
Oil and grease, infrared (mg/L)	3.3	3.3	3.1	3.2	3.6
Total organic carbon (mg/L)	19	20	20	20	2.9
pH (pH units)	11.6	11.7	11.7	11.7	0.2

NA Not Analyzed

NC Not Calculable

RSD Relative Standard Deviation (I) = Standard Deviation/Mean * 100

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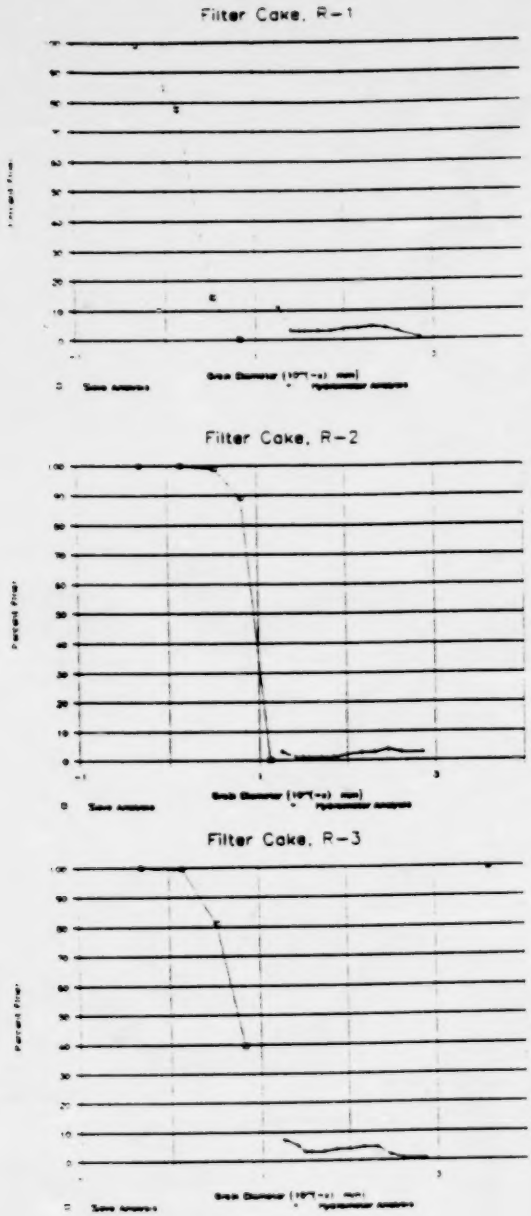

Figure A-1. Particle Size Distribution in the Filter Cake Samples.

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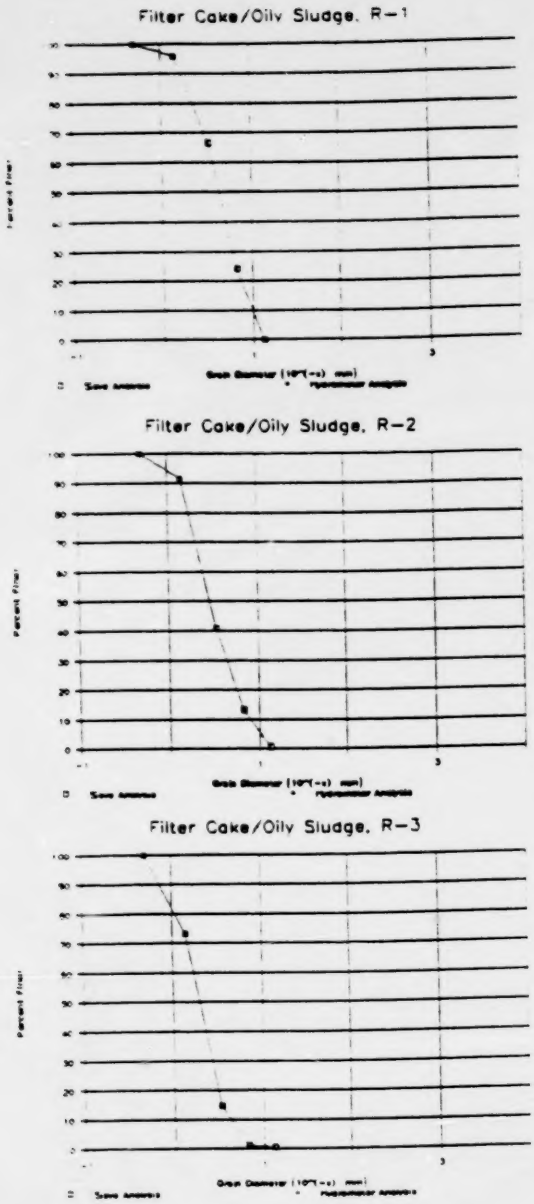

Figure A-2. Particle Size Distribution in the Filter Cake/Oily Sludge Samples.

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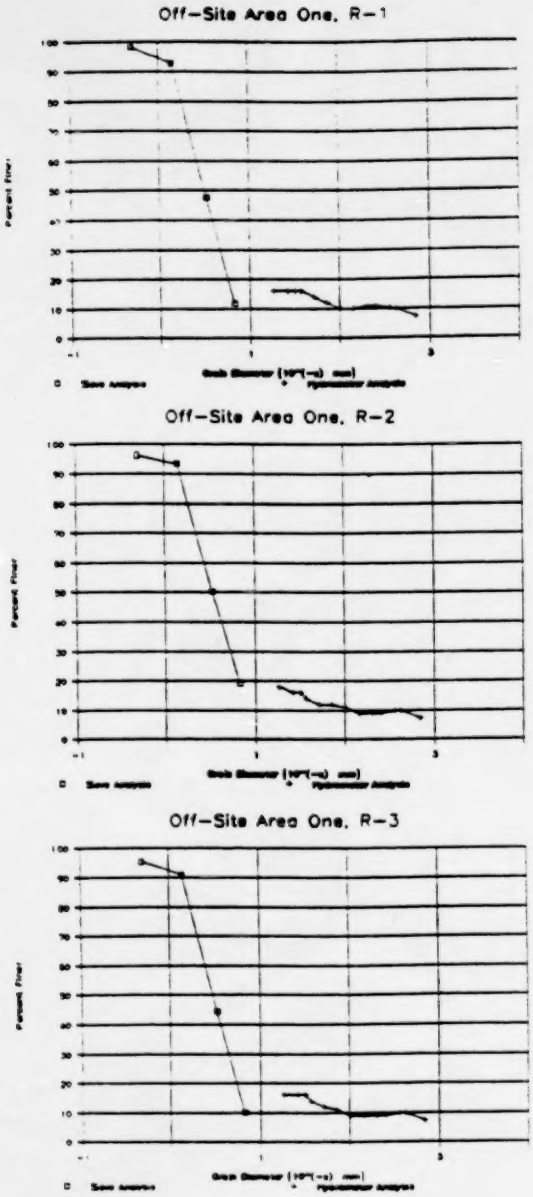

Figure A-3. Particle Size Distribution in Off-Site Area One Samples.

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APPENDIX B

LABORATORY QA/QC RESULTS

Appendix B contains the quality assurance and quality control (QA/QC) results for the samples analyzed to evaluate the Soliditech solidification/stabilization process. All QA/QC results, including both descriptive text and tables for duplicate sample analyses, matrix spike analyses, surrogate spike analyses, and blank analyses, are included in this appendix.

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B.1 INTRODUCTION

As discussed in Section II "Test Plan" of the Demonstration Plan for the Soliditech, Inc. Solidification Process, many different types of analyses (engineering and geotechnical, leaching tests, and chemical and physical tests) were performed on the samples collected for this project. The two major sample matrices for this project were pretreatment (or untreated) soils, and treated (solidified) soils. An additional four sample submatrices were generated through leaching tests performed on the two major sample matrices. These additional sample types were extracts from the following leaching procedures:

- Toxicity Characteristic Leaching Procedure (TCLP);
- Batch Extraction Test (BET);
- American Nuclear Society 16.1 Test (ANS 16.1); and
- EPA Method 1310 (EP).

Although each sample matrix was not analyzed for all constituents, the major analyses performed to which quality control (QC) results (general quality control objectives are discussed in Section 2.0) are reported were metals (by ICPES, cold vapor atomic absorption spectroscopy, and graphite furnace atomic absorption spectroscopy methods), PCBs, semivolatile organics, volatile organics, oil and grease, total organic carbon (TOC), filterable residue (also known as total dissolved solids -- TDS), loss on ignition at 550°C (LOI), pH, and conductivity (Eh).

Since the specific analyses varied for each sample matrix, the following discussion is organized on the major sample matrix (pretreatment or treated soils), the type of extract (the submatrix: leachates from the TCLP, BET, ANS 16.1, and EP extraction procedures) for each major sample matrix, and

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each specific analytical method. Section 3.0 presents the QC results for the pretreatment soils, and Section 4.0 presents the results for the treated soils. The detailed duplicate, matrix spike, and blank results tables are presented in Attachment A. Quality control results for the WILT leaching tests, which are not yet completed, will be presented in a later report.

A few concerns were noted with these analyses. These concerns are summarized below:

- Recoveries of matrix spikes outside the acceptance criteria for selenium and thallium analyzed by AA for both pre- and post-treatment matrices;

- Holding times were exceeded for the extraction of pre-treatment TCLP leachates analyzed for Method 8240; and

- Poor recoveries for Method 8270 acid fraction matrix spike and surrogate compounds for post-treatment samples.

These results are discussed in detail in Sections B.3 and B.4. Please note that all samples with low metal recoveries for matrix spikes were reanalyzed.

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B.2 QUALITY CONTROL OBJECTIVES

Quality control (QC) tests associated with the methods used for this project included multipoint calibrations (mixed standard calibrations for metals by the ICPES system); the measure of precision through the use of duplicate samples and duplicate analyses; matrix spike and surrogate spike samples; and calibration, analytical, preparation, and leaching (TCLP, BET, ANS 16.1, EP, or WILT) blanks;. Each of these QC tests are discussed below.

B.2.1 Internal Quality Control

The calibration, calibration blanks, and other internal laboratory quality control steps are not presented in this report. A detailed discussion of these internal QC steps is found in Section 7.0, Internal Quality Control, of Section IV, "Quality Assurance Project Plan", of the Demonstration Plan for the Soliditech, Inc., Solidification Process. Laboratories were required to be within specific acceptance criteria for analyses to proceed. If calibration failed the acceptance criteria at any point, the analyses were repeated.

B.2.2 Precision (Duplicate Analyses)

The precision of the analytical data was evaluated using (1) standard deviation, (2) range, and (3) coefficient of variation (also known as the relative standard deviation). Of particular concern was the evaluation of the variability of the data, as expressed by the coefficient of variation (CV), among duplicate samples and duplicate analyses.

The acceptance criteria for precision are listed below:

- Metals - 20% RPD (CV)
- PCBs: - 50% RPD
- Oil and Grease and Total Organic Carbon - 20% RPD

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- Volatiles and Semivolatiles - 50% RPD

- pH - ± 0.05 pH units

- Eh - ± 5mV

- TDS and LOI - 20% RPD

B.2.3 Matrix Spike Samples

Another quality control check, matrix spike samples, were used to determine if the sample matrix caused any interferences with the analysis for a specific analyte or type of analyte. This was accomplished through the use of matrix spike samples. Matrix spike samples are samples which are split into three parts. A known quantity of analyte (or analytes) is added to two of the three splits. These samples are then carried through all preparation, extraction (where necessary), and analysis steps.

Using the resulting measured concentration, and subtracting the amount of analyte spiked and the analyte present in the unspiked split, a percent recovery for each analyte is calculated. If the mean percent recovery is outside of the acceptance criteria, then matrix interferences are suspected. For example, if consistently low recoveries for selenium are reported for one matrix and submatrix, then all reported results for selenium in that sample type may be biased low.

Acceptance criteria are presented below:

- Metals - 80-120% recovery

- PCBs: Aroclor-1254 - 29-131% recovery
  Aroclor-1260 - 8-127% recovery

- Oil and Grease - 80-120% recovery

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- Volatiles: 1,1-Dichloroethene - D-234% recovery
  Benzene - 37-151% recovery
  Chlorobenzene - 37-160% recovery
  Toluene - 47-150% recovery
  Trichloroethene - 71-157% recovery

- Semivolatiles: 1,2,4-Trichlorobenzene - 44-142% recovery
  1,4-Dichlorobenzene - 20-124% recovery
  2,4-Dinitrotoluene - 39-139% recovery
  2-Chlorophenol - 23-134% recovery
  Acenaphthene - 47-145% recovery
  Di-n-propylnitrosamine - D-230% recovery
  Nitrophenol - D-132% recovery
  Pentachlorophenol - 14-176% recovery
  Phenol - 5-112% recovery
  Pyrene - 52-115% recovery
  p-Chloro-m-cresol - 22-147% recovery

B.2.4 Surrogate Spike Samples

In additional to the matrix spike samples, surrogate spike compounds were also added to all samples analyzed for organic compounds. A surrogate is a compound not normally found in nature, and is used to determine the efficiency of a method extraction step. The surrogate procedure is similar to the matrix spike samples, in that a known quantity of surrogate was added to a sample, and a percent recovery calculated.

Acceptance criteria are presented below:

- PCBs: Dibutylchlorendate - 24-154% recovery
  2,4,5,6-Tetrachloroethane-d_4 - 26-114% recovery

- Volatiles: 1,2-Dichloroethane-d_4 - 76-114% recovery
  Toluene-d_8 - 88-110% recovery
  p-Bromofluorobenzene - 86-115% recovery

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- Semivolatiles: 2-Fluorophenol - 21-100% recovery
  Phenol-d_5 - 10-94% recovery
  Nitrobenzene-d_5 - 35-114% recovery
  2-Fluorobiphenyl - 43-116% recovery
  2,4,6-Tribromophenol - 10-123% recovery
  Terphenyl-d_{14} - 33-141% recovery

B.2.5 Method Spike Samples

Method spike samples are laboratory-pure water which is spiked with analytes of interest and taken through the entire digestion/extraction process, and then analyzed. Method spike samples are used to assure that the extraction and analysis steps are in control.

Acceptance criteria are presented in Section B.2.3.

B.2.6 Blanks

Blank samples were used to determine if there were any contaminants in the laboratory-pure water, reagents, glassware, or other apparatus used by the laboratory. The results of the blank analyses were used in the evaluation of the sample results, in order to discount any values that were due to such laboratory contamination, and not from the samples themselves. The major types of blanks used were as follows:

- Analytical blank: the analytical blank is an aliquot of laboratory-pure water, or solvent, that was analyzed without going through any preparation steps, and thus was only a check on the reagent and the analytical system.

- Preparation blank: the preparation blank is an aliquot of laboratory-pure water, or solvent, that is carried through all preparation, digestion, and analysis steps. Any contaminant in the laboratory reagents, glassware, or system should be detected in this blank.

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- Leaching blank: the leaching blank is a further check on laboratory or reagent contamination. This blank consists of an aliquot of leaching solution (laboratory-pure water for the BET and ANS 16.1 procedures, and 0.5 N acetic acid for the TCLP and EP procedures) that was submitted along with the leachate samples from the Radian Solid Waste Lab (which performed the leaching tests) to the analytical laboratory. This type of blank should identify any possible contaminants in the laboratory-pure water and reagents used in the Solid Waste Lab, the preparation steps taking place in the analytical laboratory, or the system itself.

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B.3 QUALITY CONTROL RESULTS FOR THE PRETREATMENT SAMPLES

Pretreatment samples analyzed for the Soliditech project consist of four submatrices: soil samples, BET leachates of soil samples, EP leachates of soil samples and TCLP leachates of soil samples. Summaries of the results for the quality control tests associated with these pretreatment samples are presented below. Detailed results are presented in Attachments A.1 through A.4, A.10, and A.11. Problems associated with this matrix include:

- Recovery of matrix spikes outside of the acceptance criteria for selenium and thallium analyzed by AA; and

- Holding times were exceeded for the extraction of TCLP leachates for volatiles analysis.

These problems are discussed in detail below.

B.3.1 Pretreatment Soils

The pretreatment soil samples were analyzed for metals by ICPES and by AA, PCBs, oil and grease, volatile organic compounds and semivolatile organic compounds by GC/MS, pH, bulk density, Eh, water content, mean particle size, and loss on ignition. Quality control tests associated with these methods included duplicate samples, spiked samples, surrogate spike samples, and blank analyses. Results are presented in Tables B.1, B.2, B.3, and B.4, respectively. A few problems were noted with these analyses:

- ICPES matrix spike recoveries for aluminum, antimony, calcium, nickel, selenium, and silver were outside the acceptance criteria;

- Matrix spikes were low for selenium and thallium by AA;

- Due to high arsenic concentrations (about 90 mg/Kg) the ICPES screen was used for quantitation;

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- Recovery of 2,4-dinitrotoluene was low for one of three matrix spiked samples analyzed by Method 8240; and

- One of the PCB surrogate compounds, dibutylchlorendate, was lost during sample cleanup with silica gel. Recoveries for the second surrogate, 2,4,5,6-tetrachlorometaxylene, were within the acceptance limits.

A more detailed discussion of the quality control associated with this method follows.

Metals, ICPES

Pretreatment soil samples were analyzed for metals by ICPES. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. Variability of the duplicate samples is greater than expected. Matrix spike recoveries for aluminum, antimony, calcium, selenium, silver and thallium were outside the acceptance criteria.

Matrix spike duplicate pairs were analyzed for metals by ICPES. Variability was greater than expected for aluminum (30.3%), barium (21.7%), calcium (39%), nickel (72%), and thallium (24.5%). Three predigestion pairs were also analyzed. Variabilities for beryllium (21.4%) and thallium (71.7%) were greater than expected. Soil matrices are notoriously non-homogeneous, therefore, these results are not totally unexpected.

Recoveries for matrix spike samples were below acceptance criteria for one sample of six for aluminum, two samples of four for antimony, one sample of four for calcium, three samples of four for nickel, both matrix spike samples for selenium, four of six spiked samples for silver, and two of four samples for zinc. Recoveries were above the acceptance criteria for three of six matrix spike samples for aluminum, two of four samples for antimony, two of four samples for barium, two of four samples for calcium, one

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of four samples for copper, one of four samples for lead, and two of two samples for thallium. Recoveries for the method spike sample for aluminum, antimony, lead, nickel, selenium, sodium, and thallium were also below acceptance criteria. Elements whose method spikes failed the acceptance criteria were reanalyzed.

Preparation blanks were also analyzed with these samples. Aluminum (0.21 mg/L) was detected, slightly above the detection limit (0.2 mg/L), in one of three blanks. Sodium (1.1 mg/L) was detected, slightly above the detection limit (1.0 mg/L) in one of one preparation blanks. These low levels of metals are not indicative of serious contamination.

Metals, Cold Vapor AA

Pretreatment soils were analyzed for mercury by cold vapor AA. Quality control results associated with this method include duplicates, spikes and blanks. Low recovery was reported for one matrix spike sample analyzed for mercury.

Two matrix duplicate pairs and one predigestion duplicate pair were analyzed for mercury. Variability is low in both types of duplicates. No problems are indicated by these results.

Four matrix spike duplicate samples were analyzed for mercury. Results for one sample were slightly below the acceptance criteria of 80 - 120%.

Six preparation blanks were analyzed for mercury. Mercury was not detected in any of the samples.

Metals, Graphite Furnace AA

Arsenic, selenium and thallium were analyzed by graphite furnace AA for pretreatment soils. Quality control tests associated with this analyses

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include duplicate analyses, spike analyses, and blank analyses. The matrix spike results for selenium and thallium are below the acceptance criteria.

Two matrix duplicate pairs of samples were analyzed for arsenic, selenium, and thallium. Variability of selenium was high (19.4% CV), however, the results do meet the acceptance criteria specified by the QAPP. Repeatability of the thallium results was good. Three pairs of predigestion duplicate samples were also analyzed. Repeatability of all three metals was within the acceptance criteria. Variability of results in a soil matrix is not unexpected.

Six matrix spike samples were analyzed for arsenic, four samples for selenium, and five samples were analyzed for thallium. Arsenic was not recovered in two of the matrix spike samples because the spike amount was insignificant when compared to the levels detected in the samples. Recoveries for two arsenic samples were high (200%). Matrix spike recoveries for two of four selenium samples were below the acceptance criteria. The mean percent recovery for selenium is 69%. Four of the five spike results for thallium were below the acceptance criteria. The mean percent recovery for thallium is 71%. Selenium and thallium recoveries may be biased low.

One preparation blank sample was analyzed for arsenic, selenium and thallium. These elements were not detected in the blank samples.

PCBs

The quality control associated with the analyses of PCBs by GC using Method 8080 included analysis of matrix spike duplicate samples, matrix spike samples, surrogate spike samples, and reagent blank samples. These results are presented in Tables B.1, B.2, B.3, and B.4, respectively. Only one minor problem was noted with these samples. In all thirteen samples, the recovery of the surrogate, dibutylchlorendate, was below the acceptance criteria (20 - 150% recovery) because the surrogate was lost during the silica gel cleanup stage. There were no other problems with these analyses.

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One matrix spike duplicate sample was analyzed. The variability in these samples as measured by the Coefficient of Variation (CV) is quite low (11 %), well within the acceptance criteria of <50% CV.

Three samples were spiked with Aroclor-1254 and two samples were spiked with Aroclor-1260 to provide a measure of the accuracy of this analysis with this matrix. All five results were well within the acceptance criteria stated in the QAPP.

All thirteen samples were spiked with two surrogate compounds, dibutylchlorendate and 2,4,5,6-tetrachlorometaxylene. Dibutylchlorendate was lost (0% recovery) in all thirteen samples due to the silica gel cleanup required by this matrix. However, recovery of 2,4,5,6-tetrachlorometaxylene (TCMX) in all thirteen samples was well within the acceptance limits (17 - 152% recovery) specified by the QAPP. Recovery of TCMX and the matrix spike compounds in these samples suggests that any Aroclor present in the pretreatment soil samples would have been detected.

One reagent blank was analyzed. Nothing was detected.

Oil and Grease

Oil and grease samples were analyzed for pretreatment soils by infrared spectroscopy. Quality control results associated with these methods include duplicate analyses. The predigestion duplicate analyzed with these samples was repeated within 13.6% CV, which is acceptable. No problems were noted with this analysis.

Volatile Organic Compounds

Pretreatment soil samples were analyzed for volatile organic compounds by GC/MS using Method 8240. Quality control tests associated with this method include: matrix spike duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. Results are presented in Tables

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B.1, B.2, B.3, and B.4, respectively. There were no problems associated with these analyses.

One sample was analyzed in duplicate. Variability in the five matrix spike compounds in this sample was within 25% CV. These results are well within the acceptance criteria of 50% CV.

Two samples were spiked with five matrix spike compounds. Recovery of all compounds was with the acceptance criteria specified in the QAPP.

Sixteen samples were spiked with three surrogate compounds. Recovery of these compounds was within the acceptance criteria specified in the QAPP.

Two types of blanks were analyzed with these samples, a methanol (reagent) blank and a system blank. The target compounds were not detected in either of these samples.

Semivolatile Organic Compounds

Pretreatment soil samples were analyzed for semivolatile organics by GC/MS using Method 8270. Quality control tests associated with these results include duplicate analysis, spike analyses, surrogate spiked samples, and blank analysis. Variability for 2,4-dinitrotoluene was higher than expected. Recovery of one of three matrix spike samples was low for 2,4-dinitrotoluene. Surrogate recoveries for nitrobenzene-d_5 were lower than expected for three samples, and for phenol-d_5 were higher than expected for two of the samples. These results are discussed in detail below.

One matrix duplicate sample pair was analyzed with these samples. Variability for 2,4-dinitrotoluene was slightly higher (64.9% CV) than expected (50% CV). All the other results were within 20% CV.

Three matrix spike samples were analyzed for semivolatile organics. Recovery for all of the compounds was within acceptance criteria, except for one of three results for 2,4-dinitrotoluene, which contributed to the high variability noted in the previous paragraph.

Six surrogate compounds were added to the twelve samples analyzed by 8270. Recoveries were acceptable, except for nitrobenzene-d_5 and phenol-d_5. Three of the twelve nitrobenzene-d_5 recoveries were below acceptance criteria. Two of the twelve phenol-d_5 recoveries were above the acceptance criteria.

Seven compounds, 2-methylnaphthalene, anthracene, and hexachlorobenzene, naphthalene, pentachlorobenzene, phenanthrene and phenol were detected in the pre-demonstration blank.

pH

One field duplicate sample pair was analyzed for pH. Repeatability as measured by coefficient of variation was less than one, which is good.

Bulk Density

Two field duplicate sample pairs were analyzed for bulk density. Repeatability was within 11% CV.

Eh

One field duplicate sample pair was analyzed for Eh. Repeatability was excellent (less than 1% CV).

Water Content

One field duplicate pair was analyzed for water content. The repeatability of the test was 30% CV, which suggests that these samples were not homogenous.

Mean Particle Size

One field duplicate sample was analyzed for mean particle size. Repeatability for this test was 12% CV.

Loss on Ignition

Three predigestion duplicate pairs were analyzed for LOI. The reproducibility of this analyses was excellent (1.5% CV). Nothing was detected in the one analytical blank analyzed with these samples.

B.3.2 TCLP Leachates of Pretreatment Soil

TCLP leachates of pretreatment soil were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease by IR, volatile organic compounds and semivolatile organic compounds by GC/MS, pH, Eh, and TDS. Results for duplicate analyses, matrix spike analyses, surrogate spike analyses and blank analyses are presented in Tables B.5, B.6, B.7, and B.8, respectively. The following problems were associated with these results:

- ICPES matrix recoveries were outside the acceptance criteria for barium, calcium, sodium, and zinc;

- Recoveries for arsenic, selenium, lead, and thallium were outside the acceptance limits for at least one AA matrix spikes;

- Recoveries of the PCB matrix spike compound, Aroclor-1254, were above the acceptance criteria in both matrix spike samples; and

- Holding times were exceeded for the extraction of the TCLP leachates for volatile organics analyses.

The results for these samples are discussed in more detail below.

Metals, ICPES

TCLP leachates of pretreatment soils were analyzed for metals by ICPES. Quality control tests associated with these results include duplicate analyses, spike analyses, and blank analyses. Variability of arsenic by ICPES was higher than desired; however, since this was only used as a screening method for arsenic, the variability has no significant impact on data quality. Matrix spike recoveries were outside the acceptance criteria for barium, calcium, sodium, and zinc. Sodium was detected in a large quantity (1,100 mg/L) in the TCLP blank, a sodium acetate buffer. These results are discussed in detail below.

One field duplicate was analyzed for this method. Results show good reproducibility for most elements. Cadmium (67% CV), nickel (47% CV) and zinc (23.6% CV) were more variable than the other metals. However, matrix spike duplicate analysis shows that the reproducibility of the sample results were good except for arsenic (38.6% CV). No problems were indicated by these results.

Four matrix spike samples were analyzed. Recoveries were above the acceptance criteria for all four samples analyzed for barium, one of four samples analyzed for calcium, and all four samples analyzed for zinc. Matrix spike recoveries for sodium were all below the acceptance criteria. However, all the method spike analyses for all metals were inside the acceptance criteria.

One TCLP leachate blank and one preparation blank were analyzed for metals analysis. Sodium was detected in large quantities (1,100 mg/L) in the TCLP leachate blank, a sodium acetate buffer. Sodium was also detected in the preparation blank (3 mg/L). Calcium was detected at two times the detection limit in the preparation blank sample.

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Metals, Cold Vapor AA

Mercury in TCLP leachates was analyzed by cold vapor AA. Quality control tests associated with this analysis include duplicate analysis, spike analysis, and blank analysis. There were no problems indicated by these results.

One field duplicate pair, one predigestion duplicate pair and one matrix spike pair were analyzed for mercury. Nothing was detected in the field duplicate or the predigestion duplicate. Repeatability of the matrix spike duplicate pair was 3.8% CV.

Three matrix spike samples were analyzed for this method. Recovery was well inside the acceptance criteria specified by the QAPP.

Nothing was detected in the one TCLP blank and the four preparation blanks analyzed for mercury.

Metals, Graphite Furnace AA

Arsenic, lead, thallium, and selenium were analyzed by graphite furnace AA for TCLP leachates of pretreatment soils. Quality control tests associated with this analysis include duplicate analysis, spike analyses and blank analysis. Variability was greater than expected for all metals analyzed by AA. Low spike recovery was reported for selenium, thallium, and lead. High spike recovery was reported for arsenic. These problems are discussed in detail below.

One field duplicate pair was analyzed for arsenic, selenium, and thallium. Repeatability for arsenic (10.9% CV) was good. Selenium and thallium were not detected in this sample. One matrix duplicate sample pair was analyzed for arsenic and lead, and two matrix duplicate sample pairs were analyzed for selenium and thallium. Variability for arsenic and lead was slightly higher than expected with results of 38.6% CV and 40% CV,

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respectively. Variability of selenium and thallium were higher than expected, 141% CV and 103% CV, respectively. One predigestion duplicate was analyzed for arsenic, selenium, and thallium. Repeatability for arsenic was good (0% RPD). Selenium and thallium were not detected.

Two method spikes were analyzed for arsenic, lead, and thallium, and three method spikes were analyzed for selenium. All results were inside the 80 - 120% acceptance criteria. Four matrix spike samples were analyzed for selenium and thallium. Four of the four matrix spike samples analyzed for selenium were below acceptance criteria. Mean spike recovery for selenium was 19%. Three of the four matrix spike recoveries for thallium were below acceptance criteria. Mean spike recovery for thallium was 32%. One of two matrix spike recoveries for lead was outside the acceptance criteria. Mean spike recovery for lead was 50%. These results suggest that field results for lead, selenium, and thallium may be biased low. One of the two matrix spike results for arsenic was above acceptance criteria. The mean percent recovery for arsenic was 110%.

One TCLP leachate blank was analyzed for selenium, lead, arsenic and thallium. Arsenic was detected in the blank at 0.005 mg/L, less than three times the detection limit (0.002 mg/L). Nothing was detected in the preparation blanks analyzed with these samples.

PCBs

TCLP leachates of pretreatment soil were analyzed for PCBs by GC using EPA Method 8080. The quality control tests associated with these results include: duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. Recoveries of the matrix spike compound, Aroclor-1254, were above the acceptance criteria (29 - 131% recovery) in both matrix spike samples. These results suggest that results for field samples of this type may be biased slightly high.

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Three types of duplicates were analyzed with these samples: one analytical duplicate pair, one field duplicate pair, and one matrix spike duplicate pair. Nothing was detected in the analytical duplicate or the field duplicate pairs; therefore, no conclusions can be drawn from these results. Variability in the one matrix spike duplicate pair was low (4.4% CV), which indicates good repeatability for these samples.

Two matrix spike samples were analyzed with the TCLP leachates of pretreatment soils. In both samples, recoveries (145.5%) were slightly above the acceptance criteria (29 - 131% recovery). These results suggest that recoveries of PCBs in the TCLP leachates may be biased slightly high.

Surrogate spike recoveries for 2,4,5,6-tetrachlorometaxylene and dibutylchlorendate were inside acceptance criteria for all fourteen samples. No problems are indicated by these results.

Two types of blank were analyzed with these samples: a reagent blank and a TCLP leachate blank. Nothing was detected in either of these samples.

Oil & Grease

TCLP leachates of pretreatment soils were analyzed for oil & grease by IR. The quality control tests associated with this method are duplicate analyses and blank analyses. Variability (74.1%) was a little higher than expected for the field duplicate analysis of oil & grease. The predigestion duplicate (9.0%) was within acceptance criteria. Nothing was detected in the TCLP blank or the two analytical blanks analyzed for oil & grease.

Volatile Organic Compounds

TCLP leachates of pretreatment soil were analyzed for volatile organic compounds by GC/MS using EPA Method 8240. Quality control tests associated with these analyses include duplicate analysis, surrogate spike analysis, and blank analysis. Field duplicate results indicate more variabil-

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ity than was expected. Three compounds, 4-methyl-2-pentanone, acetone, and methylene chloride were detected above the detection limit in the TCLP leachate blank. Of these three, only the value for acetone was greater than five times the detection limit. Holding times were exceeded for the leachates to be extracted. Since there were no surrogates added before leaching, there is no way to tell if this violation impacted the samples. There were no other problems associated with these samples.

One field duplicate sample was analyzed for TCLP leachates of pretreatment soils. Of the five compounds detected in this sample, variability of four of the compounds was greater than desired. The coefficient of variation for these compounds was: 4-methyl-2-pentanone (139%), methylene chloride (82.5%), toluene (139%), xylenes (122.6%) and acetone (13.9%). Of these, methylene chloride and xylenes are not as great a concern since the duplicate values are near the detection limit and variability is greater at these levels.

Recovery of the three surrogate compounds was within acceptance criteria in all twelve samples. No potential problems are indicated by these results.

Two types of blanks were analyzed with these samples: a TCLP leachate blank, and a system blank. Three compounds were detected in the TCLP leachate blank: 4-methyl-2-pentanone (9.5 ug/L), acetone (240 ug/L) and methylene chloride (11 ug/L). Of these compounds, only acetone is considered a significant contaminant. Methylene chloride and 4-methyl-2-pentanone were detected at less than five times the detection limit. Nothing was detected in the systems blank.

Semivolatile Organics

Semivolatile organics in TCLP leachates of pretreatment soil were analyzed by GC/MS using Method 8270. Quality control tests associated with these analyses include duplicate analyses, surrogate spike analyses, and blank analyses. Slightly higher than expected recovery was reported for surrogate

compound, terphenyl-d_{14} in five of 12 samples. This problem is discussed in detail below.

One field duplicate sample was analyzed by Method 8270. Nothing was detected in this sample, therefore, no conclusions can be drawn.

In five of twelve samples, the recovery for terphenyl-d_{14} was slightly higher than expected. The acceptance criteria for this compound is 18 - 137%. In one of twelve samples, the recovery for 2-fluorophenol is below the acceptance criteria of 25 - 121% recovery. These results do not seem to indicate bias.

Nothing was detected in the TCLP blank or the reagent blank analyzed with these samples.

pH

One field duplicate of a TCLP leachate of pretreatment soils was analyzed for pH. The results meet the acceptance criteria specified in the QAPP.

Eh

One field duplicate sample was analyzed for Eh of a TCLP leachate of pretreatment soil. The results agreed within 0.3% CV.

Filterable Residue

Filterable residue (TDS) was measured for the TCLP leachates of pretreatment soil. The field duplicate and predigestion duplicate results agree within 3% CV. Nothing was detected in the analytical blank analyzed with these samples. However, the results for the TCLP blank were 4,600 mg/L. Field results near this value may be caused by TCLP leaching solution only.

B.3.3 EP Leachates of Pretreatment Soils

EP extractions of pretreatment soils were analyzed for metals by ICPES and AA, PCBs by GC, Oil & Grease, pH, Eh, and filterable residue. Quality control tests associated with these analyses include duplicate samples, spiked samples, surrogate samples, and blank analyses. Results are presented in Tables B.9, B.10, B.11, and B.12, respectively. Low recovery of selenium was reported for the matrix spikes. These results are discussed in detail below.

Metals, ICPES

EP extracts of pretreatment soils were analyzed for metals by ICPES. Quality control tests associated with these analyses include duplicate analyses, and blank analyses. There were no problems associated with these results.

One field duplicate sample pair was analyzed with these samples. Repeatability was well within 20% CV, except for cadmium (58.2%) which was detected slightly above the detection limit. More variability is expected when concentrations are low.

Nothing was detected in the EP extraction blank. Calcium and sodium were detected in one preparation blank sample at two times the detection limit. These low results should not be a significant source of contamination.

Metals, Cold Vapor AA

Mercury was analyzed by cold vapor AA for EP extractions of pretreatment soil. The quality control tests associated with these samples includes duplicate analysis, spike analysis, and blank analysis. There were no problems associated with these samples.

One field duplicate pair and one matrix duplicate pair of samples were analyzed for mercury. Nothing was detected in the field duplicate samples. There was no variation in the matrix duplicate sample.

Two samples were analyzed as matrix spikes. Recoveries were within the acceptance criteria specified by the QAPP.

Two EP extraction blanks and five preparation blanks were analyzed with these samples. Nothing was detected in any of them.

Metals, Graphite Furnace AA

Arsenic, lead, selenium, and thallium were analyzed by graphite furnace AA for EP extractions of pretreatment soils. Quality control tests associated with these tests include duplicate analyses, spike analyses, and blank analyses. Low matrix spike recoveries were reported for selenium. Arsenic was detected in the EP extraction blank. These results are discussed in detail below.

One field duplicate pair was analyzed for arsenic, lead, selenium, and thallium. Selenium and thallium were not detected in this sample. The repeatability for arsenic and lead was good. One matrix duplicate sample was analyzed for arsenic. One analytical duplicate was analyzed for arsenic. Repeatability for these samples was good for both sample types.

Method and matrix spikes were analyzed for selenium and thallium. The recoveries for the method spike analyses were well within the acceptance criteria specified by the QAPP. Recovery (38%) for selenium in the matrix spike sample was below the acceptance criteria.

Preparation and EP extraction blanks were analyzed. Nothing was detected in the preparation blanks. Arsenic was detected in the EP extraction blank at the detection limit.

PCBs

EP extracts of pretreatment soil were analyzed for PCBs by Method 8080 using a GC. The quality control tests associated with this method include: duplicate analysis, surrogate spike analysis, and blank analysis. There were no problems associated with these results.

One field duplicate pair of samples was analyzed for PCBs. Nothing was detected in either sample, therefore, no conclusions can be drawn from these results.

Both surrogate compounds, 2,4,5,6-tetrachlorometaxylene and dibutylchlorendate, were recovered within acceptance limits in all eleven samples.

An EP Extraction blank and a reagent blank were analyzed with these samples. Nothing was detected in either blank.

Oil and Grease

One field duplicate sample and one predigestion duplicate sample were analyzed for oil and grease by IR. Nothing was detected in the field duplicate sample. Repeatability of the predigestion duplicate was good (<1% CV). Nothing was detected in the EP extraction blank analyzed with these samples.

pH

One field duplicate sample was analyzed for pH. The results were within the acceptance criteria specified by the QAPP.

Eh

One field duplicate sample was analyzed for Eh. The results were within the acceptance criteria specified by the QAPP.

Filterable Residue

One field duplicate sample and two predigestion samples were analyzed for filterable residue. The results were within the acceptance criteria specified by the QAPP. One EP extraction blank and one analytical blank were analyzed with these samples. The EP extraction blank results were 20 mg/L.

B.3.4 BET Leachates of Pretreatment Soil

BET Leachates of pretreatment soil were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease and TOC by IR, pH, Eh, and filterable residue. The following problems were associated with these analyses:

- Matrix spike recoveries for thallium and lead analyses by AA were outside the acceptance criteria.

Results for duplicate analyses, matrix spike samples, surrogate spike samples, and blank analyses are presented in Tables B.13, B.14, B.15, and B.16, respectively. The results are discussed in detail below.

Metals, ICPES

Metals were analyzed for BET leachates of pretreatment soil by ICPES. Quality control tests associated with these samples include duplicate analyses, spike analyses, and blank analyses. There were no significant problems associated with these analyses.

Three pairs of samples were analyzed as field duplicate samples. Since the sample concentration in these samples is low, the variability is higher than desired. The repeatability of the matrix spike duplicate results is excellent. All of the results except sodium were below 5% CV. Variability for sodium was 6.2% CV. There are no problems indicated by these analyses.

Three method spikes and four matrix spike samples were analyzed. All of the method spike recoveries were within the acceptance criteria of 80 - 120% recovery. Two of the four spike results for aluminum, copper, and silver were below the acceptance criteria of 80-120% recovery. One of the four spike results for cadmium and sodium were below the acceptance criteria. However, the mean spike recoveries are within acceptance criteria.

Calcium and sodium were detected in all of the preparation blanks analyzed for BET leachates. However, none of these results was greater than three times the detection limit. Nothing was detected in the BET leachate blank.

Metals, Cold Vapor AA

Mercury in BET leachates of pretreatment soils was analyzed by cold vapor AA. Quality control test results associated with these analyses are duplicate analyses, spike samples, and blank analyses. There were no problems associated with these samples.

Three field duplicate pairs, two predigestion duplicate pairs, and one matrix spike pair were analyzed for mercury. Nothing was detected in the field duplicates or the predigestion duplicates. Repeatability of the matrix spike duplicate sample pair was within acceptance criteria.

Two matrix samples were analyzed for mercury. Recoveries were within the acceptance criteria specified by the QAPP.

Nothing was detected in the two BET blanks or the seven preparation blanks analyzed for mercury.

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Metals, Graphite Furnace AA

Arsenic, selenium, lead, and thallium were analyzed by graphite furnace AA for BET leachates of pretreatment soils. Quality control tests associated with these methods include duplicate analyses, spike analyses, and blank analyses. Matrix spike recoveries for thallium and lead were outside the acceptance criteria. These results are discussed in detail below.

One matrix duplicate pair, one predigestion pair and three field duplicate pairs of samples were analyzed. Variability for arsenic and thallium in the field duplicate were higher than expected. Recoveries for the matrix spike duplicate and predigestion were all inside the acceptance criteria specified by the QAPP.

Two method spikes and two matrix spike samples were analyzed. Recoveries of lead were below the acceptance criteria for both matrix spike samples. Recovery for lead in these samples may be biased low.

One BET leachate blank was analyzed. Arsenic was detected in the leachate blank at two and one-half times the detection limit. Lead was detected in four of the five preparation blanks analyzed at less than five times the detection limit.

PCBs

BET leachates of pretreatment soil were analyzed by GC using Method 8080. The quality control results associated with these analysis include duplicate analysis, matrix spike analysis, surrogate spike analysis, and blank analysis. Two of the thirty-nine surrogate spikes of 2,4,5,6-tetrachlorometaxylene were below acceptance criteria. However, the results for dibutylchlorendate were inside the acceptance criteria for these samples, therefore, the recoveries for the field samples associated with these two samples should be valid. These results are discussed in detail below.

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Three types of duplicates were analyzed with the BET leachates of pretreatment solids: analytical duplicates, field duplicates and a matrix spike duplicate. Nothing was detected in the four pairs of analytical duplicates or in the three pairs of field duplicates. Therefore, no conclusions about these samples can be drawn from these analyses. One matrix spike duplicate pair was analyzed. Variability, as measured by CV, was quite low (0.7%) for this pair of samples, well within the acceptance criteria of <50%. There are no problems evidenced by these results.

Recovery of the two matrix spike samples analyzed was excellent. The mean recovery of the matrix spike compound, Aroclor-1254, was 94.5%, well within the acceptance criteria of 29 - 131%.

Surrogate spike results for the thirty-nine samples was quite good also. However, recovery of two of the samples was below acceptance criteria (17 - 152%) for 2,4,5,6-tetrachlorometaxylene. The recovery for dibutylchlorendate was acceptable for these samples. Therefore, no problems are evidenced by these results.

Two types of blanks (a BET leachate blank and two reagent blanks) were analyzed with these samples. Nothing was detected in any of the blanks.

Oil & Grease and TOC

BET leachates of pretreatment soils were analyzed for oil and grease and TOC by IR. Quality control tests associated with these analyses include duplicate analyses, matrix spike analyses, and blank analyses. There were no major problems associated with these results.

Three field duplicate pairs were analyzed for oil and grease. Nothing was detected in these samples. Four field duplicate pairs were analyzed for TOC. The variability of these analyses was 37% CV, which is not bad for this matrix. Four predigestion duplicate pairs were analyzed for oil and grease and TOC, the variability was well within acceptance criteria. Five

matrix duplicate pairs were analyzed for total organic carbon. Variability for these analyses was 3.0% CV.

Ten matrix spike samples were analyzed for total organic carbon. All of the results were within acceptance criteria.

Total organic carbon was detected in both the BET blank and the preparation blank. Results near 4.0 mg/L should be considered a false positive. Nothing was detected in the BET blank analyzed for oil and grease.

pH

BET leachates of pretreatment soils were analyzed for pH. Three predigestion duplicates were analyzed. The repeatability was within the acceptance criteria specified by the QAPP.

Eh

Three field duplicate pairs were analyzed for Eh. The repeatability met the acceptance criteria specified by the QAPP.

Filterable Residue

Three field duplicate pairs were analyzed. Repeatability for these samples was 15.8% CV. Four predigestion duplicate pairs of samples were analyzed for filterable residue. The repeatability met the acceptance criteria specified by the QAPP. Filterable residue was detected in the BET leachate blank at 30 mg/L. Nothing was detected in the analytical blank.

TABLE B.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, ICPES				
matrix duplicate				
Aluminum, ICPES	3	106 - 216	44.84	30.3
Antimony, ICPES	2	75.0 - 446	16.77	7.6
Arsenic, ICPES	1	93.5 - 93.5	2.12	2.3
Barium, ICPES	2	87.0 - 259	55.59	21.7
Beryllium, ICPES	1	88.0 - 88.0	1.41	1.6
Cadmium, ICPES	2	87.3 - 106	4.10	3.9
Calcium, ICPES	2	85.5 - 343	121.88	39.0
Chromium, ICPES	2	86.8 - 110	5.02	4.6
Copper, ICPES	2	89.0 - 117	11.51	9.9
Lead, ICPES	2	83.5 - 118	9.86	8.4
Nickel, ICPES	2	50.0 - 76.6	36.01	72.0
Selenium, ICPES	1	0 - 0	0.00	0.0
Silver, ICPES	3	0 - 80.9	0.87	1.8
Sodium, ICPES	1	89.5 - 89.5	12.02	13.4
Thallium, ICPES	1	179 - 179	43.85	24.5
Zinc, ICPES	2	77.5 - 102	11.02	10.8
Predigestion				
Aluminum, ICPES	3	3335 - 8215	372.12	4.6
Antimony, ICPES	3	ND - ND	NC	NC
Arsenic, ICPES	3	49.1 - 112	3.69	5.8
Barium, ICPES	3	685 - 2475	36.13	2.7
Beryllium, ICPES	3	0.13 - 0.23	0.03	21.4
Cadmium, ICPES	3	ND - 1.6	0.10	5.9
Calcium, ICPES	3	456 - 3845	78.11	2.7
Chromium, ICPES	3	3.0 - 11.1	0.27	4.5
Copper, ICPES	3	17.3 - 32.9	1.05	3.8
Lead, ICPES	3	633 - 2660	107.42	5.1
Nickel, ICPES	3	1.1 - 3.3	0.45	14.1
Selenium, ICPES	3	ND - ND	NC	NC
Silver, ICPES	3	ND - ND	NC	NC
Sodium, ICPES	3	61.6 - 992	15.40	7.3
Thallium, ICPES	3	5.2 - 6.4	4.53	71.7
Zinc, ICPES	3	9.8 - 126	5.75	5.2

NC: Not Calculable
ND: Not Detected

TABLE B.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
PCBs					
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	1	107 -	107	2.83	2.6
Dibutylchlorendate	1	0 -	0	0.00	0.0
PCB-1260	1	83.5 -	83.5	9.19	11.0
Volatile Organics, Matrix Spike					
matrix duplicate					
1,1-Dichloroethene	1	83.0 -	83.0	8.49	10.2
1,2-Dichloroethane-d4	1	98.0 -	98.0	1.41	1.4
Benzene	1	93.0 -	93.0	9.90	10.6
Chlorobenzene	1	107 -	107	12.73	11.9
Toluene	1	94.5 -	94.5	21.92	23.2
Toluene-d8	1	97.0 -	97.0	0.00	0.0
Trichloroethene	1	99.5 -	99.5	16.27	16.3
p-Bromofluorobenzene	1	98.5 -	98.5	0.71	0.7
Semivolatile Organics, Matrix Spike					
matrix duplicate					
1,2,4-Trichlorobenzene	1	91.5 -	91.5	4.95	5.4
1,4-Dichlorobenzene	1	84.5 -	84.5	0.71	0.8
2,4,6-Tribromophenol	1	110 -	110	2.83	2.6
2,4-Dinitrotoluene	1	61.0 -	61.0	39.60	64.9
2-Chlorophenol	1	89.5 -	89.5	3.54	4.0
2-Fluorobiphenyl	1	101 -	101	2.83	2.8
2-Fluorophenol	1	89.0 -	89.0	2.83	3.2
Acenaphthene	1	82.0 -	82.0	2.83	3.4
Di-n-propylnitrosamine	1	37.5 -	37.5	2.12	5.7
Nitrobenzene-d5	1	69.0 -	69.0	42.43	61.5
Nitrophenol	1	64.0 -	64.0	7.07	11.1
Pentachlorophenol	1	131 -	131	4.24	3.2
Phenol	1	78.5 -	78.5	0.71	0.9
Phenol-d5	1	117 -	117	4.24	3.6
Pyrene	1	64.0 -	64.0	5.66	8.8
Terphenyl-d14	1	79.0 -	79.0	14.14	17.9

NC: Not Calculable
ND: Not Detected

TABLE B.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
p-Chloro-m-cresol	1	87.5 - 87.5	0.71	0.8
9040				
field duplicate				
pH	1	3.4 - 3.4	0.02	0.6
ASA-13-2				
field duplicate				
Bulk Density	2	1.1 - 1.2	0.13	10.9
Metals, Cold Vapor				
matrix duplicate				
Mercury	2	75.5 - 85.1	3.53	4.7
Predigestion				
Mercury	1	0.17 - 0.17	0.01	4.3
D-1498				
field duplicate				
Eh	1	403 - 403	1.41	0.4
D-2216				
field duplicate				
Water Content	1	25.3 - 25.3	7.36	29.1
D-422				
field duplicate				
Mean Particle Size	1	0.24 - 0.24	0.03	11.8
Metals, Graphite Furnace				
matrix duplicate				
Arsenic, graphite AA	2	0 - 190	31.60	23.5

NC: Not Calculable
ND: Not Detected

TABLE B.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Selenium, graphite AA	2	52.0 -	86.0	10.19	19.4
Thallium, graphite AA	2	50.3 -	73.0	0.50	1.0
Predigestion					
Arsenic, graphite AA	3	14.4 -	92.2	5.41	10.7
Selenium, graphite AA	3	ND -	0.30	0.02	5.2
Thallium, graphite AA	3	ND -	0.24	0.04	17.7
Infrared Methods					
Predigestion					
Oil and grease, infrared	2	25677 -	28846	3493.81	13.6
LOI					
Predigestion					
Loss on ignition at 550C	3	528000 -	736000	10655.25	1.5

NC: Not Calculable
ND: NOt Detected

TABLE B.2 MATRIX SPIKE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Acenaphthene	3	82.3	2.1	0	0	47.0 - 145.0
Bis-n-propylnitrosamine	3	52.7	26.3	0	0	0 - 210.0
Dinitrophenol	3	59.7	9.0	0	0	0 - 132.0
Pentachlorophenol	3	109.3	37.6	0	0	14.0 - 176.0
Phenol	3	78.0	1.0	0	0	5.0 - 112.0
Pyrene	3	72.3	15.0	0	0	52.0 - 115.0
p-Chloro-m-cresol	3	87.3	0.58	0	0	22.0 - 147.0
Metals, Cold Vapor						
matrix spike						
Mercury	4	80.5	6.2	1	0	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	1	96.8		0	0	80.0 - 120.0
Selenium, graphite AA	1	100.0		0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	6	101.2	87.9	2	2	80.0 - 120.0
Selenium, graphite AA	4	68.9	20.8	2	0	80.0 - 120.0
Thallium, graphite AA	5	71.2	24.4	4	0	80.0 - 120.0

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TABLE B 2 MATRIX SPIKE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	2	83.2	5.4	1	0	80.0 - 120.0
Antimony, ICPES	2	44.2	62.4	1	0	80.0 - 120.0
Arsenic, ICPES	1	87.5		0	0	80.0 - 120.0
Barium, ICPES	2	87.3	8.9	0	0	80.0 - 120.0
Beryllium, ICPES	1	90.0		0	0	80.0 - 120.0
Cadmium, ICPES	1	104.0		0	0	80.0 - 120.0
Calcium, ICPES	2	89.2	0.71	0	0	80.0 - 120.0
Chromium, ICPES	1	82.0		0	0	80.0 - 120.0
Copper, ICPES	1	80.0		0	0	80.0 - 120.0
Lead, ICPES	1	74.2		1	0	80.0 - 120.0
Nickel, ICPES	1	.0		1	0	80.0 - 120.0
Selenium, ICPES	1	.0		1	0	80.0 - 120.0
Silver, ICPES	2	83.5	3.5	0	0	80.0 - 120.0
Sodium, ICPES	1	28.0		1	0	80.0 - 120.0
Thallium, ICPES	1	.0		1	0	80.0 - 120.0
Zinc, ICPES	1	85.6		0	0	80.0 - 120.0
matrix spike						
Aluminum, ICPES	6	144.0	65.4	1	3	80.0 - 120.0
Antimony, ICPES	4	262.5	213	2	2	80.0 - 120.0
Arsenic, ICPES	2	93.9	2.0	0	0	80.0 - 120.0
Barium, ICPES	4	175.5	114	0	2	80.0 - 120.0
Beryllium, ICPES	2	87.7	1.3	0	0	80.0 - 120.0
Cadmium, ICPES	4	96.8	11.5	0	0	80.0 - 120.0
Calcium, ICPES	4	215.4	180	1	2	80.0 - 120.0
Chromium, ICPES	4	98.6	14.3	0	0	80.0 - 120.0

TABLE B.2 MATRIX SPIKE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Copper, ICPES	4	102.7	18.4	0	1	80.0 - 120.0
Lead, ICPES	4	101.3	20.8	0	1	80.0 - 120.0
Nickel, ICPES	4	63.3	33.4	3	0	80.0 - 120.0
Selenium, ICPES	2	0	0	2	0	80.0 - 120.0
Silver, ICPES	6	43.9	36.6	4	0	80.0 - 120.0
Sodium, ICPES	2	89.6	12.4	0	0	80.0 - 120.0
Thallium, ICPES	2	179.3	43.6	0	2	80.0 - 120.0
Zinc, ICPES	4	89.9	17.0	2	0	80.0 - 120.0
PCBs						
matrix spike						
PCB-1254	3	85.3	16.8	0	0	29.0 - 131.0
PCB-1260	2	83.5	9.2	0	0	8.0 - 127.0
Volatile Organics, Matrix Spike						
matrix spike						
1,1-Dichloroethene	2	83.0	8.5	0	0	0 - 234.0
Benzene	2	93.0	9.9	0	0	37.0 - 151.0
Chlorobenzene	2	107.0	12.7	0	0	37.0 - 160.0
Toluene	2	94.5	21.9	0	0	47.0 - 150.0
Trichloroethene	2	99.5	16.3	0	0	71.0 - 157.0
Semivolatile Organics, Matrix Spike						
matrix spike						
1,2,4-Trichlorobenzene	3	89.3	5.1	0	0	44.0 - 142.0
1,4-Dichlorobenzene	3	82.0	4.4	0	0	20.0 - 124.0
2,4-Dinitrotoluene	3	67.7	30.3	1	0	39.0 - 139.0
2-Chlorophenol	3	84.7	8.7	0	0	23.0 - 134.0

TABLE B 3 SURROGATE SPIKE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

[illegible] - Pretreatment SOLIDS -

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6 Tetrachloro-m-xylene	13	98.5	11.3	0	0	17.0 - 152.0
Dibutylchlorendate	13	0	0	13	0	20.0 - 150.0
Volatile Organics						
Surrogate spike						
1,2 Dichloroethane-d4	14	98.4	2.5	0	0	70.0 - 121.0
BFB	14	93.9	2.0	0	0	74.0 - 121.0
d8-toluene	14	99.8	2.6	0	0	81.0 - 117.0
Volatile Organics, Matrix Spike						
Surrogate spike						
1,2 Dichloroethane-d4	2	98.0	1.4	0	0	70.0 - 121.0
Toluene-d8	2	97.0	0	0	0	81.0 - 117.0
p-Bromofluorobenzene	2	98.5	0.71	0	0	74.0 - 121.0
Semivolatile Organics						
Surrogate spike						
2,4,6 Tribromophenol	9	100.6	6.0	0	0	19.0 - 122.0
2 Fluorobiphenyl	9	87.4	12.0	0	0	30.0 - 115.0
2 Fluorophenol	9	75.6	12.8	0	0	25.0 - 121.0
Nitrobenzene-d5	9	67.1	32.4	3	0	23.0 - 120.0
Phenol-d5	9	103.6	7.8	0	0	24.0 - 113.0
Terphenyl-d14	9	76.7	10.0	0	0	18.0 - 137.0
Semivolatile Organics, Matrix Spike						

TABLE B-3 SURROGATE SPIKE RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

[illegible] - Pretreatment [illegible] -

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Surrogate spike						
2,4,6-Tribromophenol	3	101.3	15.1	0	0	19.0 - 122.0
2-Fluorobiphenyl	3	95.7	9.5	0	0	30.0 - 115.0
2-Fluorophenol	3	90.0	2.6	0	0	25.0 - 121.0
Nitrobenzene-d5	3	75.7	32.1	0	0	23.0 - 120.0
Phenol-d5	3	106.7	18.1	0	2	24.0 - 113.0
Terphenyl-d14	3	86.3	16.2	0	0	18.0 - 137.0

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Pretreatment						
Metals, ICPES preparation						
	Aluminum, ICPES	3	1	0.21	0.21	0.20
	Antimony, ICPES	2	0			0.20
	Arsenic, ICPES	1	0			0.30
	Barium, ICPES	3	0			0.010
	Beryllium, ICPES	2	0			0.0020
	Cadmium, ICPES	1	0			0.0050
	Calcium, ICPES	2	0			1.0
	Chromium, ICPES	1	0			0.030
	Copper, ICPES	1	0			0.020
	Lead, ICPES	1	0			0.050
	Nickel, ICPES	1	0			0.020
	Selenium, ICPES	1	0			0.30
	Silver, ICPES	3	0			0.030
	Sodium, ICPES	1	1	1.1	1.1	
	Thallium, ICPES	1	0			0.10
	Zinc, ICPES	1	0			0.020
PCBs Reagent						
	PCB-1016	1	0			100
	PCB-1221	1	0			100
	PCB-1232	1	0			100
	PCB-1242	1	0			100
	PCB-1248	1	0			100
	PCB-1254	1	0			100
	PCB-1260	1	0			100
Volatile Organics Methanol blank						
	1,1,1-Trichloroethane	1	0			2.0
	1,1,2,2-Tetrachloroethane	1	0			2.0
	1,1,2-Trichloroethane	1	0			2.0
	1,1-Dichloroethane	1	0			2.0
	1,1-Dichloroethene	1	0			2.0
	1,2,3-Trichloropropane	1	0			2.0

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Volatile Organics						
Methanol blank						
	1,2-Dichloroethane	1	0			2.0
	1,2-Dichloropropane	1	0			2.0
	2-Butanone	1	0			10.0
	2-Chloroethyl vinyl ether	1	0			2.0
	2-Hexanone	1	0			10.0
	4-Methyl-2-pentanone	1	0			2.0
	Acetone	1	0			25.0
	Acrolein	1	0			75.0
	Acrylonitrile	1	0			30.0
	Benzene	1	0			2.0
	Bromoform	1	0			2.0
	Bromomethane	1	0			2.0
	Carbon Disulfide	1	0			2.0
	Carbon Tetrachloride	1	0			2.0
	Chlorobenzene	1	0			2.0
	Chlorodibromomethane	1	0			2.0
	Chloroethane	1	0			2.0
	Chloroform	1	0			2.0
	Chloromethane	1	0			2.0
	Dibromomethane	1	0			2.0
	Dichlorobromomethane	1	0			2.0
	Dichlorodifluoromethane	1	0			2.0
	Ethyl benzene	1	0			2.0
	Ethyl methacrylate	1	0			50.0
	Iodomethane	1	0			2.0
	Methylene chloride	1	0			10.0
	Styrene	1	0			2.0
	Tetrachloroethylene	1	0			2.0
	Toluene	1	0			2.0
	Trichloroethene	1	0			2.0
	Trichlorofluoromethane	1	0			10.0
	Vinyl Acetate	1	0			2.0
	Vinyl chloride	1	0			2.0
	Xylenes	1	0			2.0
	cis-1,3-Dichloropropene	1	0			2.0
	trans-1,2-Dichloroethene	1	0			2.0

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number Above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Volatile Organics					
Methanol blank					
trans-1,3-Dichloropropene	1	0			2.0
System blank					
1,1,1-Trichloroethane	1	0			1.5
1,1,2,2-Tetrachloroethane	1	0			1.5
1,1,2-Trichloroethane	1	0			1.5
1,1-Dichloroethane	1	0			1.5
1,1-Dichloroethene	1	0			1.5
1,2,3-Trichloropropane	1	0			1.5
1,2-Dichloroethane	1	0			1.5
1,2-Dichloropropane	1	0			1.5
2-Butanone	1	0			7.5
2-Chloroethyl vinyl ether	2	0			1.5
2-Hexanone	1	0			7.5
4-Methyl-2-pentanone	1	0			1.5
Acetone	2	0			10.0
Acrolein	2	0			56.0
Acrylonitrile	2	0			23.0
Benzene	2	0			1.5
Bromoform	2	0			1.5
Bromomethane	2	0			1.5
Carbon Disulfide	2	0			1.5
Carbon Tetrachloride	2	0			1.5
Chlorobenzene	2	0			1.5
Chlorodibromomethane	2	0			1.5
Chloroethane	2	0			1.5
Chloroform	2	0			1.5
Chloromethane	2	0			1.5
Dibromomethane	2	0			1.5
Dichlorobromomethane	1	0			1.5
Dichlorodifluoromethane	2	0			1.5
Ethyl benzene	1	0			1.5
Ethyl methacrylate	1	0			10.0
Iodomethane	1	0			1.5
Methylene chloride	1	0			7.0
Styrene	1	0			1.0
Tetrachloroethylene	1	0			1.0

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Volatile Organics					
System blank					
Toluene	1	0			1.5
Trichloroethane	1	0			1.5
Trichlorofluoromethane	1	0			7.5
Vinyl Acetate	1	0			1.5
Vinyl chloride	1	0			1.5
Xylenes	1	0			1.5
cis-1,3-Dichloropropene	1	0			1.5
trans-1,2-Dichloroethene	1	0			1.5
trans-1,3-Dichloropropene	1	0			1.5
Semivolatile Organics					
Reagent					
1,2,4,5-Tetrachlorobenzene	1	0			50.0
1,2,4-Trichlorobenzene	1	0			5.0
1,2-Dichlorobenzene	1	0			5.0
1,2-Diphenylhydrazine	1	0			5.0
1,3-Dichlorobenzene	1	0			5.0
1,3-Dinitrobenzene	1	0			50.0
1,4-Dichlorobenzene	1	0			5.0
1-Chloronaphthalene	1	0			5.0
1-Naphthylamine	1	0			50.0
2,3,4,6-Tetrachlorophenol	1	0			50.0
2,4,5-Trichlorophenol	1	0			25.0
2,4,6-Trichlorophenol	1	0			25.0
2,4-Dichlorophenol	1	0			5.0
2,4-Dimethylphenol	1	0			5.0
2,4-Dinitrophenol	1	0			25.0
2,4-Dinitrotoluene	1	0			5.0
2,6-Dichlorophenol	1	0			5.0
2,6-Dinitrotoluene	1	0			5.0
2-Chloronaphthalene	1	0			5.0
2-Chlorophenol	1	0			5.0
2-Methylnaphthalene	1	1	150	150.0	
2-Naphthylamine	1	0			50.0
2-Nitroaniline	1	0			25.0
2-Nitrophenol	1	0			25.0

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Semivolatile Organics					
Reagent					
2-Picoline	1	0			25.0
3,3'-Dichlorobenzidene	1	0			10.0
3-Methylcholanthrene	1	0			10.0
3-Nitroaniline	1	0			25.0
4,6-Dinitro-2-Methylphenol	1	0			25.0
4-Aminobiphenyl	1	0			130
4-Bromophenyl phenyl ether	1	0			5.0
4-Chloro-3-methylphenol	1	0			5.0
4-Chlorophenyl phenyl ether	1	0			5.0
4-Nitroaniline	1	0			25.0
4-Nitrophenol	1	0			25.0
5-Nitro-o-toluidine	1	0			25.0
7,12-Dimethylbenz(a)anthracene	1	0			10.0
Acenaphthylene	1	0			5.0
Acetophenone	1	0			5.0
Aniline	1	0			10.0
Anthracene	1	1	30.0	30.0	
Benzidine	1	0			5.0
Benzo(a)anthracene	1	0			5.0
Benzo(a)pyrene	1	0			5.0
Benzo(b)fluoranthene	1	0			5.0
Benzo(g,h,i)perylene	1	0			5.0
Benzo(k)fluoranthene	1	0			5.0
Benzoic acid	1	0			5.0
Benzyl alcohol	1	0			5.0
Butyl benzyl phthalate	1	0			5.0
Chlorobenzilate	1	0			5.0
Di-n-octylphthalate	1	0			5.0
Dibenz(a,j)acridine	1	0			5.0
Dibenzo(a,h)anthracene	1	0			5.0
Diethylphthalate	1	0			5.0
Dimethylphthalate	1	0			5.0
Diphenylamine	1	0			5.0
Ethyl methanesulfonate	1	0			5.0
Hexachlorobenzene	1	1	370	370.0	
Hexachlorocyclopentadiene	1	0			5.0

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Semivolatile Organics						
Reagent						
	Hexachloroethane	1	0			5.0
	Indeno(1,2,3-c,d)pyrene	1	0			5.0
	Methyl methanesulfonate	1	0			10.0
	N-Nitrosodi-n-butylamine	1	0			25.0
	N-Nitrosodimethylamine	1	0			25.0
	N-Nitrosodiphenylamine	1	0			25.0
	N-Nitrosodipropylamine	1	0			25.0
	N-Nitrosopiperidine	1	0			25.0
	Naphthalene	1	1	55.0	55.0	
	Nitrobenzene	1	0			5.0
	Pentachlorobenzene	1	1	26.0	26.0	
	Pentachloronitrobenzene	1	0			50.0
	Pentachlorophenol	1	0			25.0
	Phenacetin	1	0			50.0
	Phenanthrene	1	1	45.0	45.0	
	Phenol	1	1	50.0	50.0	
	Pronamide	1	0			50.0
	a,a-Dimethylphenethylamine	1	0			13.0
	bis(2-Chloroethoxy)methane	1	0			5.0
	bis(2-Chloroethyl)ether	1	0			5.0
	bis(2-Chloroisopropyl)ether	1	0			5.0
	o-Cresol	1	0			5.0
	p-Chloroaniline	1	0			10.0
	p-Cresol	1	0			5.0
	p-Dimethylaminoazobenzene	1	0			5.0
Metals, Cold Vapor preparation						
	Mercury	6	0			0.00020
Metals, Graphite Furnace preparation						
	Arsenic, graphite AA	1	0			0.16
	Selenium, graphite AA	1	0			0.0050
	Thallium, graphite AA	1	0			0.0010

TABLE B.4 BLANK RESULTS FOR PRETREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
LOI					
analytical					
	Loss on ignition at 550C	1	1	0 - 0.00000	

TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Bromoform	1	ND -	ND	NC	NC
Bromomethane	1	ND -	ND	NC	NC
Carbon Disulfide	1	ND -	ND	NC	NC
Carbon Tetrachloride	1	ND -	ND	NC	NC
Chlorobenzene	1	ND -	ND	NC	NC
Chlorodibromomethane	1	ND -	ND	NC	NC
Chloroethane	1	ND -	ND	NC	NC
Chloroform	1	ND -	ND	NC	NC
Chloromethane	1	ND -	ND	NC	NC
Dibromomethane	1	ND -	ND	NC	NC
Dichlorobromomethane	1	ND -	ND	NC	NC
Dichlorodifluoromethane	1	ND -	ND	NC	NC
Ethyl benzene	1	ND -	ND	NC	NC
Ethyl methacrylate	1	ND -	ND	NC	NC
Iodomethane	1	ND -	ND	NC	NC
Methylene chloride	1	12.0 -	12.0	9.90	82.5
Styrene	1	ND -	ND	NC	NC
Tetrachloroethylene	1	ND -	ND	NC	NC
Toluene	1	63.5 -	63.5	88.40	139.2
Trichloroethene	1	ND -	ND	NC	NC
Trichlorofluoromethane	1	ND -	ND	NC	NC
Vinyl Acetate	1	ND -	ND	NC	NC
Vinyl chloride	1	ND -	ND	NC	NC
Xylenes	1	7.5 -	7.5	9.19	122.6
cis-1,3-Dichloropropene	1	ND -	ND	NC	NC
trans-1,2-Dichloroethene	1	ND -	ND	NC	NC
trans-1,3-Dichloropropene	1	ND -	ND	NC	NC
Semivolatile Organics					
field duplicate					
1,2,4,5-Tetrachlorobenzene	1	ND -	ND	NC	NC
1,2,4-Trichlorobenzene	1	ND -	ND	NC	NC
1,2-Dichlorobenzene	1	ND -	ND	NC	NC
1,2-Diphenylhydrazine	1	ND -	ND	NC	NC
1,3-Dichlorobenzene	1	ND -	ND	NC	NC
1,3-Dinitrobenzene	1	ND -	ND	NC	NC
1,4-Dichlorobenzene	1	ND -	ND	NC	NC
1-Chloronaphthalene	1	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, ICPES				
field duplicate				
Aluminum, ICPES	1	0.45 - 0.45	0.07	15.7
Antimony, ICPES	1	ND - ND	NC	NC
Barium, ICPES	1	1.0 - 1.0	0.13	12.6
Beryllium, ICPES	1	ND - ND	NC	NC
Cadmium, ICPES	1	0.0048 - 0.0048	0.00	67.0
Calcium, ICPES	1	9.5 - 9.5	0.57	6.0
Chromium, ICPES	1	ND - ND	NC	NC
Copper, ICPES	1	0.030 - 0.030	0.00	0.0
Lead, ICPES	1	4.3 - 4.3	0.78	18.3
Nickel, ICPES	1	0.015 - 0.015	0.01	47.1
Silver, ICPES	1	ND - ND	NC	NC
Sodium, ICPES	1	1100 - 1100	0.00	0.0
Zinc, ICPES	1	0.060 - 0.060	0.01	23.6
matrix duplicate				
Aluminum, ICPES	2	86.5 - 93.3	0.71	0.8
Antimony, ICPES	2	82.5 - 97.4	1.25	1.3
Arsenic, ICPES	1	110 - 110	42.43	38.6
Barium, ICPES	2	275 - 299	5.02	1.8
Beryllium, ICPES	2	110 - 112	0.00	0.0
Cadmium, ICPES	2	99.0 - 113	1.12	1.1
Calcium, ICPES	2	100 - 120	10.00	8.3
Chromium, ICPES	2	104 - 110	0.71	0.7
Copper, ICPES	2	110 - 113	0.00	0.0
Lead, ICPES	2	81.0 - 87.8	0.00	0.0
Nickel, ICPES	2	103 - 111	5.00	4.9
Selenium, ICPES	1	0 - 0	0.00	0.0
Silver, ICPES	2	83.0 - 91.8	0.50	0.5
Sodium, ICPES	2	0 - 0	0.00	0.0
Zinc, ICPES	2	178 - 187	5.10	2.9
PCBs				
Analytical				
PCB-1016	1	ND - ND	NC	NC

NC: Not Calculable
ND: NOt Detected

TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
PCB-1221	1	ND -	ND	NC	NC
PCB-1232	1	ND -	ND	NC	NC
PCB-1242	1	ND -	ND	NC	NC
PCB-1248	1	ND -	ND	NC	NC
PCB-1254	1	ND -	ND	NC	NC
PCB-1260	1	ND -	ND	NC	NC
field duplicate					
PCB-1016	1	ND -	ND	NC	NC
PCB-1221	1	ND -	ND	NC	NC
PCB-1232	1	ND -	ND	NC	NC
PCB-1242	1	ND -	ND	NC	NC
PCB-1248	1	ND -	ND	NC	NC
PCB-1254	1	ND -	ND	NC	NC
PCB-1260	1	ND -	ND	NC	NC
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	1	109 -	109	7.07	6.5
Dibutylchlorendate	1	96.5 -	96.5	14.85	15.4
PCB-1254	1	146 -	146	6.36	4.4
Volatile Organics					
field duplicate					
1,1,1-Trichloroethane	1	ND -	ND	NC	NC
1,1,2,2-Tetrachloroethane	1	ND -	ND	NC	NC
1,1,2-Trichloroethane	1	ND -	ND	NC	NC
1,1-Dichloroethane	1	ND -	ND	NC	NC
1,1-Dichloroethene	1	ND -	ND	NC	NC
1,2,3-Trichloropropane	1	ND -	ND	NC	NC
1,2-Dichloroethane	1	ND -	ND	NC	NC
1,2-Dichloropropane	1	ND -	ND	NC	NC
2-Chloroethyl vinyl ether	1	ND -	ND	NC	NC
2-Hexanone	1	ND -	ND	NC	NC
4-Methyl-2-pentanone	1	207 -	207	287.41	139.0
Acetone	1	255 -	255	35.36	13.9
Acrolein	1	ND -	ND	NC	NC
Acrylonitrile	1	ND -	ND	NC	NC
Benzene	1	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
1-Naphthylamine	1	ND -	ND	NC	NC
2,3,4,6-Tetrachlorophenol	1	ND -	ND	NC	NC
2,4,5-Trichlorophenol	1	ND -	ND	NC	NC
2,4,6-Trichlorophenol	1	ND -	ND	NC	NC
2,4-Dichlorophenol	1	ND -	ND	NC	NC
2,4-Dimethylphenol	1	ND -	ND	NC	NC
2,4-Dinitrophenol	1	ND -	ND	NC	NC
2,4-Dinitrotoluene	1	ND -	ND	NC	NC
2,6-Dichlorophenol	1	ND -	ND	NC	NC
2,6-Dinitrotoluene	1	ND -	ND	NC	NC
2-Chloronaphthalene	1	ND -	ND	NC	NC
2-Chlorophenol	1	ND -	ND	NC	NC
2-Methylnaphthalene	1	ND -	ND	NC	NC
2-Naphthylamine	1	ND -	ND	NC	NC
2-Nitroaniline	1	ND -	ND	NC	NC
2-Nitrophenol	1	ND -	ND	NC	NC
2-Picoline	1	ND -	ND	NC	NC
3,3'-Dichlorobenzidene	1	ND -	ND	NC	NC
3-Methylcholanthrene	1	ND -	ND	NC	NC
3-Nitroaniline	1	ND -	ND	NC	NC
4-Aminobiphenyl	1	ND -	ND	NC	NC
4-Bromophenyl phenyl ether	1	ND -	ND	NC	NC
4-Chloro-3-methylphenol	1	ND -	ND	NC	NC
4-Nitroaniline	1	ND -	ND	NC	NC
4-Nitrophenol	1	ND -	ND	NC	NC
5-Nitro-o-toluidine	1	ND -	ND	NC	NC
Acenaphthene	1	ND -	ND	NC	NC
Acenaphthylene	1	ND -	ND	NC	NC
Acetophenone	1	ND -	ND	NC	NC
Aniline	1	ND -	ND	NC	NC
Anthracene	1	ND -	ND	NC	NC
Benzidine	1	ND -	ND	NC	NC
Benzo(a)anthracene	1	ND -	ND	NC	NC
Benzo(a)pyrene	1	ND -	ND	NC	NC
Benzo(b)fluoranthene	1	ND -	ND	NC	NC
Benzo(k)fluoranthene	1	ND -	ND	NC	NC
Benzoic acid	1	ND -	ND	NC	NC
Benzyl alcohol	1	ND -	ND	NC	NC
Butyl benzyl phthalate	1	ND -	ND	NC	NC

NC: Not Calculable

ND: NOt Detected

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TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Chlorobenzilate	1	ND -	ND	NC	NC
Chrysene	1	ND -	ND	NC	NC
Di-n-butylphthalate	1	ND -	ND	NC	NC
Di-n-octylphthalate	1	ND -	ND	NC	NC
Dibenz(a,j)acridine	1	ND -	ND	NC	NC
Dibenzo(a,h)anthracene	1	ND -	ND	NC	NC
Dibenzofuran	1	ND -	ND	NC	NC
Diethylphthalate	1	ND -	ND	NC	NC
Dimethylphthalate	1	ND -	ND	NC	NC
Diphenylamine	1	ND -	ND	NC	NC
Ethyl methanesulfonate	1	ND -	ND	NC	NC
Fluoranthene	1	ND -	ND	NC	NC
Fluorene	1	ND -	ND	NC	NC
Hexachlorobenzene	1	ND -	ND	NC	NC
Hexachlorobutadiene	1	ND -	ND	NC	NC
Hexachlorocyclopentadiene	1	ND -	ND	NC	NC
Hexachloroethane	1	ND -	ND	NC	NC
Isophorone	1	ND -	ND	NC	NC
Methyl methanesulfonate	1	ND -	ND	NC	NC
N-Nitrosodi-n-butylamine	1	ND -	ND	NC	NC
N-Nitrosodimethylamine	1	ND -	ND	NC	NC
N-Nitrosodiphenylamine	1	ND -	ND	NC	NC
N-Nitrosodipropylamine	1	ND -	ND	NC	NC
N-Nitrosopiperidine	1	ND -	ND	NC	NC
Naphthalene	1	ND -	ND	NC	NC
Nitrobenzene	1	ND -	ND	NC	NC
Pentachlorobenzene	1	ND -	ND	NC	NC
Pentachloronitrobenzene	1	ND -	ND	NC	NC
Pentachlorophenol	1	ND -	ND	NC	NC
Phenacetin	1	ND -	ND	NC	NC
Phenanthrene	1	ND -	ND	NC	NC
Phenol	1	ND -	ND	NC	NC
Pronamide	1	ND -	ND	NC	NC
Pyrene	1	ND -	ND	NC	NC
a,a-Dimethylphenethylamine	1	ND -	ND	NC	NC
bis(2-Chloroethoxy)methane	1	ND -	ND	NC	NC
bis(2-Chloroethyl)ether	1	ND -	ND	NC	NC
bis(2-Ethylhexyl)phthalate	1	ND -	ND	NC	NC
o-Cresol	1	ND -	ND	NC	NC

NC: Not Calculable

ND: NOt Detected

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TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
p-Chloroaniline	1	ND -	ND	NC	NC
p-Cresol	1	ND -	ND	NC	NC
p-Dimethylaminoazobenzene	1	ND -	ND	NC	NC
9040					
field duplicate					
pH	1	4.6 -	4.6	0.04	0.9
Metals, Cold Vapor					
field duplicate					
Mercury	1	ND -	ND	NC	NC
matrix duplicate					
Mercury	1	92.5 -	92.5	3.54	3.8
Predigestion					
Mercury	1	ND -	ND	NC	NC
D-1498					
field duplicate					
Eh	1	274 -	274	0.71	0.3
Metals, Graphite Furnace					
field duplicate					
Arsenic, graphite AA	1	0.0065 -	0.0065	0.00	10.9
Selenium, graphite AA	1	ND -	ND	NC	NC
Thallium, graphite AA	1	ND -	ND	NC	NC
matrix duplicate					
Arsenic, graphite AA	1	110 -	110	42.43	38.6
Lead, graphite AA	1	50.0 -	50.0	70.72	141.4
Selenium, graphite AA	2	0 -	38.0	10.00	37.2
Thallium, graphite AA	2	0 -	63.0	19.00	42.7
Predigestion					

NC: Not Calculable
ND: NOt Detected

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TABLE B.5 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Arsenic, graphite AA	1	0.19 - 0.19	0.00	0.0
Selenium, graphite AA	1	ND - ND	NC	NC
Thallium, graphite AA	1	ND - ND	NC	NC
Infrared Methods				
field duplicate				
Oil and grease, infrared	1	0.53 - 0.53	0.39	74.1
Predigestion				
Oil and grease, infrared	1	2.4 - 2.4	0.21	9.0
Filterable Residue (TDS)				
field duplicate				
Filterable Residue (TDS)	1	4450 - 4450	70.72	1.6
Predigestion				
Filterable Residue (TDS)	1	6100 - 6100	141.44	2.3

NC: Not Calculable
ND: NOt Detected

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TABLE B 6 MATRIX SPIKE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	2	92.7	0.42	0	0	80.0 - 120.0
Antimony, ICPES	3	94.7	4.6	0	0	80.0 - 120.0
Barium, ICPES	2	110.0	0	0	0	80.0 - 120.0
Beryllium, ICPES	2	116.5	4.9	0	0	80.0 - 120.0
Cadmium, ICPES	2	110.0	0	0	0	80.0 - 120.0
Calcium, ICPES	2	93.6	2.1	0	0	80.0 - 120.0
Chromium, ICPES	1	110.0		0	0	80.0 - 120.0
Copper, ICPES	2	110.0	0	0	0	80.0 - 120.0
Lead, ICPES	2	90.8	3.2	0	0	80.0 - 120.0
Nickel, ICPES	2	110.0	0	0	0	80.0 - 120.0
Silver, ICPES	2	91.9	0.14	0	0	80.0 - 120.0
Sodium, ICPES	2	92.8	0.28	0	0	80.0 - 120.0
Zinc, ICPES	2	109.5	0.71	0	0	80.0 - 120.0
matrix spike						
Aluminum, ICPES	4	89.9	3.9	0	0	80.0 - 120.0
Antimony, ICPES	4	89.9	8.6	0	0	80.0 - 120.0
Barium, ICPES	4	287.0	14.4	0	4	80.0 - 120.0
Beryllium, ICPES	4	111.0	1.2	0	0	80.0 - 120.0
Cadmium, ICPES	4	105.8	7.8	0	0	80.0 - 120.0
Calcium, ICPES	4	110.0	14.1	0	1	80.0 - 120.0
Chromium, ICPES	4	106.8	3.3	0	0	80.0 - 120.0
Copper, ICPES	4	111.5	1.7	0	0	80.0 - 120.0
Lead, ICPES	4	84.4	3.9	0	0	80.0 - 120.0
Nickel, ICPES	4	107.0	6.2	0	0	80.0 - 120.0
Silver, ICPES	4	87.4	5.1	0	0	80.0 - 120.0

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TABLE B 6 MATRIX SPIKE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Sodium, ICPES	4	0	0	4	0	80 0 - 120 0
Zinc, ICPES	4	182 6	6 7	0	4	80 0 - 120 0
PCBs						
matrix spike						
PCB 1254	2	165 5	6 4	0	2	29 0 - 111 0
Metals, Cold Vapor						
matrix spike						
Mercury	3	86 7	10 4	1	0	80 0 - 120 0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	2	86 0	5 7	0	0	80 0 - 120 0
Lead, graphite AA	2	100 0	0	0	0	80 0 - 120 0
Selenium, graphite AA	3	97 3	9 9	0	0	80 0 - 120 0
Thallium, graphite AA	2	89 0	12 7	0	0	80 0 - 120 0
matrix spike						
Arsenic, graphite AA	2	110 0	42 4	0	1	80 0 - 120 0
Lead, graphite AA	2	50 0	70 7	1	0	80 0 - 120 0
Selenium, graphite AA	4	19 0	23 4	4	0	80 0 - 120 0
Thallium, graphite AA	4	31 5	39 5	3	0	80 0 - 120 0

TABLE B 7 SURROGATE SPIKE RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	14	100.1	7.9	0	0	17.0 - 152.0
Dibutylchlorendate	14	94.8	8.6	0	0	20.0 - 150.0
Volatile Organics						
Surrogate spike						
1,2-Dichloroethane-d4	12	102.9	2.9	0	0	70.0 - 121.0
BFB	12	92.9	2.5	0	0	74.0 - 121.0
d8-toluene	12	93.8	3.2	0	0	81.0 - 117.0
Semivolatile Organics						
Surrogate spike						
2,4,6-Tribromophenol	12	92.8	12.2	0	0	19.0 - 122.0
2-Fluorobiphenyl	12	79.5	3.6	0	0	30.0 - 115.0
2-Fluorophenol	12	81.3	21.1	1	0	25.0 - 121.0
Nitrobenzene-d5	12	86.8	7.3	0	0	23.0 - 120.0
Phenol-d5	12	87.3	9.9	0	0	24.0 - 113.0
Terphenyl-d14	12	120.3	14.9	0	5	18.0 - 137.0

TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Pretreatment TCLP				
Metals, ICPES				
TCLP blank				
Aluminum, ICPES	1	0		0.20
Antimony, ICPES	1	0		0.20
Barium, ICPES	1	0		0.010
Beryllium, ICPES	1	0		0.0020
Cadmium, ICPES	1	0		0.0050
Calcium, ICPES	1	0		1.0
Chromium, ICPES	1	0		0.030
Copper, ICPES	1	0		0.020
Lead, ICPES	1	0		0.050
Nickel, ICPES	1	0		0.020
Silver, ICPES	1	0		0.030
Sodium, ICPES	1	1	1100 - 1100.0	
Zinc, ICPES	1	0		0.020
preparation				
Aluminum, ICPES	1	0		0.20
Antimony, ICPES	1	0		0.20
Barium, ICPES	1	0		0.010
Beryllium, ICPES	1	0		0.0020
Cadmium, ICPES	1	0		0.0050
Calcium, ICPES	1	1	2.0 - 2.0	
Copper, ICPES	1	0		0.020
Lead, ICPES	1	0		0.050
Nickel, ICPES	1	0		0.020
Silver, ICPES	1	0		0.030
Sodium, ICPES	2	2	3.0 - 3.0	
Zinc, ICPES	1	0		0.020
PCBs				
TCLP blank				
PCB-1016	1	0		0.021
PCB-1221	1	0		0.021
PCB-1232	1	0		0.042
PCB-1242	1	0		0.021
PCB-1248	1	0		0.021
PCB-1254	1	0		0.042

TABLE 8.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
PCBs						
TCLP blank						
	PCB-1260	1	0			0.042
Reagent						
	PCB-1016	1	0			0.020
	PCB-1221	1	0			0.020
	PCB-1232	1	0			0.040
	PCB-1242	1	0			0.020
	PCB-1248	1	0			0.020
	PCB-1254	1	0			0.040
	PCB-1260	1	0			0.040
Volatile Organics						
TCLP blank						
	1,1,1-Trichloroethane	1	0			2.0
	1,1,2,2-Tetrachloroethane	1	0			2.0
	1,1,2-Trichloroethane	1	0			2.0
	1,1-Dichloroethane	1	0			2.0
	1,1-Dichloroethene	1	0			2.0
	1,2,3-Trichloropropane	1	0			2.0
	1,2-Dichloroethane	1	0			2.0
	1,2-Dichloropropane	1	0			2.0
	2-Butanone	1	0			10.0
	2-Chloroethyl vinyl ether	1	0			2.0
	2-Hexanone	1	0			10.0
	4-Methyl-2-pentanone	1	1	9.5	9.5	
	Acetone	1	1	240	240.0	
	Acrolein	1	0			100
	Acrylonitrile	1	0			25.0
	Benzene	1	0			2.0
	Bromoform	1	0			2.0
	Bromomethane	1	0			2.0
	Carbon Disulfide	1	0			2.0
	Carbon Tetrachloride	1	0			2.0
	Chlorobenzene	1	0			2.0
	Chlorodibromomethane	1	0			2.0
	Chloroethane	1	0			2.0
	Chloroform	1	0			2.0

TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Semivolatile Organics						
TCLP Blank						
	1,4-Dichlorobenzene	1	0			10.0
	1-Chloronaphthalene	1	0			10.0
	1-Naphthylamine	1	0			100
	2,3,4,6-Tetrachlorophenol	1	0			100
	2,4,5-Trichlorophenol	1	0			50.0
	2,4,6-Trichlorophenol	1	0			50.0
	2,4-Dichlorophenol	1	0			10.0
	2,4-Dimethylphenol	1	0			10.0
	2,4-Dinitrophenol	1	0			50.0
	2,4-Dinitrotoluene	1	0			10.0
	2,6-Dichlorophenol	1	0			10.0
	2,6-Dinitrotoluene	1	0			10.0
	2-Chloronaphthalene	1	0			10.0
	2-Chlorophenol	1	0			10.0
	2-Methylnaphthalene	1	0			10.0
	2-Naphthylamine	1	0			100
	2-Nitroaniline	1	0			50.0
	2-Nitrophenol	1	0			50.0
	2-Picoline	1	0			50.0
	3,3'-Dichlorobenzidene	1	0			20.0
	3-Methylcholanthrene	1	0			20.0
	3-Nitroaniline	1	0			50.0
	4,6-Dinitro-2-Methylphenol	1	0			50.0
	4-Aminobiphenyl	1	0			250
	4-Bromophenyl phenyl ether	1	0			10.0
	4-Chloro-3-methylphenol	1	0			10.0
	4-Chlorophenyl phenyl ether	1	0			10.0
	4-Nitroaniline	1	0			50.0
	4-Nitrophenol	1	0			50.0
	5-Nitro-o-toluidine	1	0			50.0
	7,12-Dimethylbenz(a)anthracene	1	0			20.0
	Acenaphthene	1	0			10.0
	Acenaphthylene	1	0			10.0
	Acetophenone	1	0			10.0
	Aniline	1	0			20.0
	Anthracene	1	0			10.0

TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Volatile Organics					
System blank					
Bromoform	1	0			2.0
Bromomethane	1	0			2.0
Carbon Disulfide	1	0			2.0
Carbon Tetrachloride	1	0			2.0
Chlorobenzene	1	0			2.0
Chlorodibromomethane	1	0			2.0
Chloroethane	1	0			2.0
Chloroform	1	0			2.0
Chloromethane	1	0			2.0
Dibromomethane	1	0			2.0
Dichlorobromomethane	1	0			2.0
Dichlorodifluoromethane	1	0			2.0
Ethyl benzene	1	0			2.0
Ethyl methacrylate	1	0			50.0
Iodomethane	1	0			2.0
Methylene chloride	1	0			10.0
Styrene	1	0			2.0
Tetrachloroethylene	1	0			2.0
Toluene	1	0			2.0
Trichloroethene	1	0			2.0
Trichlorofluoromethane	1	0			10.0
Vinyl Acetate	1	0			2.0
Vinyl chloride	1	0			2.0
Xylenes	1	0			2.0
cis-1,3-Dichloropropene	1	0			2.0
trans-1,2-Dichloroethene	1	0			2.0
trans-1,3-Dichloropropene	1	0			2.0
Semivolatile Organics					
TCLP blank					
1,2,4,5-Tetrachlorobenzene	1	0			100
1,2,4-Trichlorobenzene	1	0			10.0
1,2-Dichlorobenzene	1	0			10.0
1,2-Diphenylhydrazine	1	0			10.0
1,3-Dichlorobenzene	1	0			10.0
1,3-Dinitrobenzene	1	0			100

TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Volatile Organics						
TCLP blank						
	Chloromethane	1	0			2.0
	Dibromomethane	1	0			2.0
	Dichlorobromomethane	1	0			2.0
	Dichlorodifluoromethane	1	0			2.0
	Ethyl benzene	1	0			2.0
	Ethyl methacrylate	1	0			50.0
	Iodomethane	1	0			2.0
	Methylene chloride	1	1	11.0	11.0	
	Styrene	1	0			2.0
	Tetrachloroethylene	1	0			2.0
	Toluene	1	0			2.0
	Trichloroethane	1	0			2.0
	Trichlorofluoromethane	1	0			10.0
	Vinyl Acetate	1	0			2.0
	Vinyl chloride	1	0			2.0
	Xylenes	1	0			2.0
	cis-1,3-Dichloropropene	1	0			2.0
	trans-1,2-Dichloroethene	1	0			2.0
	trans-1,3-Dichloropropene	1	0			2.0
System blank						
	1,1,1-Trichloroethane	1	0			2.0
	1,1,2,2-Tetrachloroethane	1	0			2.0
	1,1,2-Trichloroethane	1	0			2.0
	1,1-Dichloroethane	1	0			2.0
	1,1-Dichloroethene	1	0			2.0
	1,2,3-Trichloropropane	1	0			2.0
	1,2-Dichloroethane	1	0			2.0
	1,2-Dichloropropane	1	0			2.0
	2-Butanone	1	0			10.0
	2-Chloroethyl vinyl ether	1	0			2.0
	2-Hexanone	1	0			10.0
	4-Methyl-2-pentanone	1	0			2.0
	Acetone	1	0			25.0
	Acrolein	1	0			100
	Acrylonitrile	1	0			25.0
	Benzene	1	0			2.0

TABLE 5.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Semivolatile Organics						
TCLP blank						
	Benzidine	1	0			10.0
	Benzo(a)anthracene	1	0			10.0
	Benzo(a)pyrene	1	0			10.0
	Benzo(b)fluoranthene	1	0			10.0
	Benzo(g,h,i)perylene	1	0			10.0
	Benzo(k)fluoranthene	1	0			10.0
	Benzoic acid	1	0			10.0
	Benzyl alcohol	1	0			10.0
	Butyl benzyl phthalate	1	0			10.0
	Chlorobenzilate	1	0			10.0
	Chrysene	1	0			10.0
	Di-n-butylphthalate	1	0			10.0
	Di-n-octylphthalate	1	0			10.0
	Dibenz(a,j)acridine	1	0			10.0
	Dibenzo(a,h)anthracene	1	0			10.0
	Dibenzofuran	1	0			10.0
	Diethylphthalate	1	0			10.0
	Dimethylphthalate	1	0			10.0
	Diphenylamine	1	0			10.0
	Ethyl methanesulfonate	1	0			10.0
	Fluoranthene	1	0			10.0
	Fluorene	1	0			10.0
	Hexachlorobenzene	1	0			10.0
	Hexachlorobutadiene	1	0			10.0
	Hexachlorocyclopentadiene	1	0			10.0
	Hexachloroethane	1	0			10.0
	Indeno(1,2,3-c,d)pyrene	1	0			10.0
	Isophorone	1	0			10.0
	Methyl methanesulfonate	1	0			20.0
	N-Nitrosodi-n-butylamine	1	0			50.0
	N-Nitrosodimethylamine	1	0			50.0
	N-Nitrosodiphenylamine	1	0			50.0
	N-Nitrosodipropylamine	1	0			50.0
	N-Nitrosopiperidine	1	0			50.0
	Naphthalene	1	0			10.0
	Nitrobenzene	1	0			10.0

TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Semivolatile Organics						
TCLP blank						
	Pentachlorobenzene	1	0			10.0
	Pentachloronitrobenzene	1	0			100
	Pentachlorophenol	1	0			50.0
	Phenacetin	1	0			100
	Phenanthrene	1	0			10.0
	Phenol	1	0			10.0
	Pronamide	1	0			100
	Pyrene	1	0			10.0
	a,a-Dimethylphenethylamine	1	0			25.0
	bis(2-Chloroethoxy)methane	1	0			10.0
	bis(2-Chloroethyl)ether	1	0			10.0
	bis(2-Chloroisopropyl)ether	1	0			10.0
	bis(2-Ethylhexyl)phthalate	1	0			10.0
	o-Cresol	1	0			10.0
	p-Chloroaniline	1	0			20.0
	p-Cresol	1	0			10.0
	p-Dimethylaminoazobenzene	1	0			10.0
Reagent						
	1,2,4,5-Tetrachlorobenzene	1	0			100
	1,2,4-Trichlorobenzene	1	0			10.0
	1,2-Dichlorobenzene	1	0			10.0
	1,2-Diphenylhydrazine	1	0			10.0
	1,3-Dichlorobenzene	1	0			10.0
	1,3-Dinitrobenzene	1	0			100
	1,4-Dichlorobenzene	1	0			10.0
	1-Chloronaphthalene	1	0			10.0
	1-Naphthylamine	1	0			100
	2,3,4,6-Tetrachlorophenol	1	0			100
	2,4,5-Trichlorophenol	1	0			50.0
	2,4,6-Trichlorophenol	1	0			50.0
	2,4-Dichlorophenol	1	0			10.0
	2,4-Dimethylphenol	1	0			10.0
	2,4-Dinitrophenol	1	0			50.0
	2,4-Dinitrotoluene	1	0			10.0
	2,6-Dichlorophenol	1	0			10.0
	2,6-Dinitrotoluene	1	0			10.0

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TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Semivolatile Organics						
Reagent						
	2-Chloronaphthalene	1	0			10.0
	2-Chlorophenol	1	0			10.0
	2-Methylnaphthalene	1	0			10.0
	2-Naphthylamine	1	0			100
	2-Nitroaniline	1	0			50.0
	2-Nitrophenol	1	0			50.0
	2-Picoline	1	0			50.0
	3,3'-Dichlorobenzidene	1	0			20.0
	3-Methylcholanthrene	1	0			20.0
	3-Nitroaniline	1	0			50.0
	4,6-Dinitro-2-Methylphenol	1	0			50.0
	4-Aminobiphenyl	1	0			250
	4-Bromophenyl phenyl ether	1	0			10.0
	4-Chloro-3-methylphenol	1	0			10.0
	4-Chlorophenyl phenyl ether	1	0			10.0
	4-Nitroaniline	1	0			50.0
	4-Nitrophenol	1	0			50.0
	5-Nitro-o-toluidine	1	0			50.0
	7,12-Dimethylbenz(a)anthracene	1	0			20.0
	Acenaphthene	1	0			10.0
	Acenaphthylene	1	0			10.0
	Acetophenone	1	0			10.0
	Aniline	1	0			20.0
	Anthracene	1	0			10.0
	Benzidine	1	0			10.0
	Benzo(a)anthracene	1	0			10.0
	Benzo(a)pyrene	1	0			10.0
	Benzo(b)fluoranthene	1	0			10.0
	Benzo(g,h,i)perylene	1	0			10.0
	Benzo(k)fluoranthene	1	0			10.0
	Benzoic acid	1	0			10.0
	Benzyl alcohol	1	0			10.0
	Butyl benzyl phthalate	1	0			10.0
	Chlorobenzilate	1	0			10.0
	Chrysene	1	0			10.0
	Di-n-butylphthalate	1	0			10.0

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TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Semivolatile Organics						
Reagent						
	Di-n-octylphthalate	1	0			10.0
	Dibenz(a,j)acridine	1	0			10.0
	Dibenzo(a,h)anthracene	1	0			10.0
	Dibenzofuran	1	0			10.0
	Diethylphthalate	1	0			10.0
	Dimethylphthalate	1	0			10.0
	Diphenylamine	1	0			10.0
	Ethyl methanesulfonate	1	0			10.0
	Fluoranthene	1	0			10.0
	Fluorene	1	0			10.0
	Hexachlorobenzene	1	0			10.0
	Hexachlorobutadiene	1	0			10.0
	Hexachlorocyclopentadiene	1	0			10.0
	Hexachloroethane	1	0			10.0
	Indeno(1,2,3-c,d)pyrene	1	0			10.0
	Isophorone	1	0			10.0
	Methyl methanesulfonate	1	0			20.0
	N-Nitrosodi-n-butylamine	1	0			50.0
	N-Nitrosodimethylamine	1	0			50.0
	N-Nitrosodiphenylamine	1	0			50.0
	N-Nitrosodipropylamine	1	0			50.0
	N-Nitrosopiperidine	1	0			50.0
	Naphthalene	1	0			10.0
	Nitrobenzene	1	0			10.0
	Pentachlorobenzene	1	0			10.0
	Pentachloronitrobenzene	1	0			100
	Pentachlorophenol	1	0			50.0
	Phenacetin	1	0			100
	Phenanthrene	1	0			10.0
	Phenol	1	0			10.0
	Pronamide	1	0			100
	Pyrene	1	0			10.0
	a,a-Dimethylphenethylamine	1	0			25.0
	bis(2-Chloroethoxy)methane	1	0			10.0
	bis(2-Chloroethyl)ether	1	0			10.0
	bis(2-Chloroisopropyl)ether	1	0			10.0

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TABLE B.8 BLANK RESULTS FOR PRETREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics				
Reagent				
bis(2-Ethylhexyl)phthalate	1	0		10.0
o-Cresol	1	0		10.0
p-Chloroaniline	1	0		20.0
p-Cresol	1	0		10.0
p-Dimethylaminoazobenzene	1	0		10.0
Metals, Cold Vapor				
TCLP blank				
Mercury	1	0		0.00020
preparation				
Mercury	4	0		0.00020
Metals, Graphite Furnace				
TCLP blank				
Arsenic, graphite AA	1	1	0.0050 - 0.0050	
Lead, graphite AA	1	0		0.0020
Selenium, graphite AA	1	0		0.0040
Thallium, graphite AA	1	0		0.0010
preparation				
Arsenic, graphite AA	2	0		0.0020
Selenium, graphite AA	3	0		0.0050
Thallium, graphite AA	1	0		0.0010
Infrared Methods				
TCLP blank				
Oil and grease, infrared	1	0		0.40
analytical				
Oil and grease, infrared	2	0		0.40
Filterable Residue (TDS)				
TCLP blank				
Filterable Residue (TDS)	1	1	4600 - 4600.0	
analytical				
Filterable Residue (TDS)	2	0		6.0

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TABLE 8.9 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = EP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, ICPES					
field duplicate					
Aluminum, ICPES	1	ND -	ND	NC	NC
Antimony, ICPES	1	ND -	ND	NC	NC
Barium, ICPES	1	0.20 -	0.20	0.03	14.1
Beryllium, ICPES	1	ND -	ND	NC	NC
Cadmium, ICPES	1	0.0043 -	0.0043	0.00	58.2
Calcium, ICPES	1	4.6 -	4.6	0.07	1.6
Chromium, ICPES	1	ND -	ND	NC	NC
Copper, ICPES	1	ND -	ND	NC	NC
Lead, ICPES	1	0.29 -	0.29	0.01	2.5
Nickel, ICPES	1	ND -	ND	NC	NC
Silver, ICPES	1	ND -	ND	NC	NC
Sodium, ICPES	1	1.5 -	1.5	0.07	4.9
Zinc, ICPES	1	0.026 -	0.026	0.00	16.3
PCBs					
field duplicate					
PCB-1016	1	ND -	ND	NC	NC
PCB-1221	1	ND -	ND	NC	NC
PCB-1232	1	ND -	ND	NC	NC
PCB-1242	1	ND -	ND	NC	NC
PCB-1248	1	ND -	ND	NC	NC
PCB-1254	1	ND -	ND	NC	NC
PCB-1260	1	ND -	ND	NC	NC
9040					
field duplicate					
pH	1	3.8 -	3.8	0.13	3.3
Metals, Cold Vapor					
field duplicate					
Mercury	1	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

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TABLE B.9 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = EP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, Cold Vapor					
matrix duplicate					
Mercury	1	84.0 -	84.0	0.00	0.0
D-1498					
field duplicate					
Eh	1	336 -	336	11.32	3.4
Metals, Graphite Furnace					
Analytical					
Arsenic, graphite AA	1	0.77 -	0.77	0.04	4.6
field duplicate					
Arsenic, graphite AA	1	0.0075 -	0.0075	0.00	9.4
Lead, graphite AA	1	0.28 -	0.28	0.03	10.1
Selenium, graphite AA	1	ND -	ND	NC	NC
Thallium, graphite AA	1	ND -	ND	NC	NC
matrix duplicate					
Arsenic, graphite AA	1	0.77 -	0.77	0.04	4.6
Infrared Methods					
field duplicate					
Oil and grease, infrared	1	ND -	ND	NC	NC
Predigestion					
Oil and grease, infrared	1	7.5 -	7.5	0.07	0.9
Filterable Residue (TDS)					
field duplicate					
Filterable Residue (TDS)	1	77.5 -	77.5	10.61	13.7
Predigestion					

NC: Not Calculable
ND: NOt Detected

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TABLE B.9 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = EP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Filterable Residue (TDS)	2	20.0 -	1335	5.00	0.4

NC: Not Calculable
ND: NOt Detected

TABLE B 10 MATRIX SPIKE RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = EP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, Cold Vapor						
matrix spike						
Mercury	1	85.0		0	0	80.0 120.0
Metals, Graphite Furnace						
method spike						
Selenium, graphite AA	1	98.0		0	0	80.0 120.0
Thallium, graphite AA	1	92.0		0	0	80.0 120.0
matrix spike						
Selenium, graphite AA	1	38.0		1	0	80.0 120.0
Thallium, graphite AA	1	92.0		0	0	80.0 120.0

TABLE B 11 SURROGATE SPIKE RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = EP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	11	94.9	7.0	0	0	17.0 192.0
Dibutylchlorendate	11	87.1	6.2	0	0	20.0 150.0

TABLE B.12 BLANK RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Pretreatment EP						
Metals, ICPES						
EP extraction blank						
	Aluminum, ICPES	1	0			0.20
	Antimony, ICPES	1	0			0.20
	Barium, ICPES	1	0			0.010
	Beryllium, ICPES	1	0			0.0020
	Cadmium, ICPES	1	0			0.0050
	Calcium, ICPES	1	0			1.0
	Chromium, ICPES	1	0			0.030
	Copper, ICPES	1	0			0.020
	Lead, ICPES	1	0			0.050
	Nickel, ICPES	1	0			0.020
	Silver, ICPES	1	0			0.030
	Sodium, ICPES	1	0			1.0
	Zinc, ICPES	1	0			0.020
preparation						
	Aluminum, ICPES	2	0			0.20
	Antimony, ICPES	1	0			0.20
	Barium, ICPES	1	0			0.010
	Beryllium, ICPES	1	0			0.0020
	Cadmium, ICPES	2	0			0.0050
	Calcium, ICPES	1	1	1.3	1.3	
	Chromium, ICPES	2	0			0.030
	Copper, ICPES	2	0			0.020
	Lead, ICPES	2	0			0.050
	Nickel, ICPES	3	0			0.020
	Silver, ICPES	3	0			0.030
	Sodium, ICPES	1	1	2.0	2.0	
	Zinc, ICPES	2	0			0.020
PCBs						
EP extraction blank						
	PCB-1016	1	0			0.022
	PCB-1221	1	0			0.022
	PCB-1232	1	0			0.044
	PCB-1242	1	0			0.022
	PCB-1248	1	0			0.022

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TABLE B.12 BLANK RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
PCBs				
EP extraction blank				
PCB-1254	1	0		0.044
PCB-1260	1	0		0.044
Reagent				
PCB-1016	1	0		0.020
PCB-1221	1	0		0.020
PCB-1232	1	0		0.040
PCB-1242	1	0		0.020
PCB-1248	1	0		0.020
PCB-1254	1	0		0.040
PCB-1260	1	0		0.040
Metals, Cold Vapor				
EP extraction blank				
Mercury	2	0		0.00020
Preparation				
Mercury	5	0		0.00020
Metals, Graphite Furnace				
EP extraction blank				
Arsenic, graphite AA	1	1	0.0020 - 0.0020	
Lead, graphite AA	2	0		0.0020
Selenium, graphite AA	1	0		0.0040
Thallium, graphite AA	2	0		0.0020
Preparation				
Arsenic, graphite AA	3	0		0.10
Lead, graphite AA	2	0		0.0020
Selenium, graphite AA	3	0		0.40
Thallium, graphite AA	3	0		0.20
Infrared Methods				
EP extraction blank				
Oil and grease, infrared	1	0		0.40
Filterable Residue (TDS)				
EP extraction blank				
Filterable Residue (TDS)	1	1	20.0 - 20.0	

TABLE B.12 BLANK RESULTS FOR PRETREATMENT EP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Filterable Residue (TDS)						
analytical						
	Filterable Residue (TDS)	1	0			6.0

TABLE B.13 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = BET

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, ICPES					
Field duplicate					
Aluminum, ICPES	3	ND -	0.85	0.07	8.3
Antimony, ICPES	3	ND -	ND	NC	NC
Barium, ICPES	3	0.097 -	0.39	0.01	5.6
Beryllium, ICPES	3	ND -	ND	NC	NC
Cadmium, ICPES	3	ND -	0.0048	0.00	67.0
Calcium, ICPES	3	ND -	5.0	0.90	18.0
Chromium, ICPES	3	ND -	ND	NC	NC
Copper, ICPES	3	ND -	0.025	0.02	78.1
Lead, ICPES	3	ND -	0.38	0.25	73.8
Nickel, ICPES	3	ND -	0.030	0.02	66.7
Silver, ICPES	3	ND -	ND	NC	NC
Sodium, ICPES	3	ND -	1.3	1.06	84.9
Zinc, ICPES	3	ND -	0.053	0.02	47.1
Matrix duplicate					
Aluminum, ICPES	2	77.5 -	89.3	0.50	0.6
Antimony, ICPES	2	85.0 -	90.1	2.60	2.9
Barium, ICPES	2	82.0 -	88.6	0.00	0.0
Beryllium, ICPES	2	84.0 -	89.9	0.05	0.1
Cadmium, ICPES	2	79.5 -	85.7	0.50	0.6
Calcium, ICPES	2	87.0 -	92.1	1.12	1.3
Chromium, ICPES	2	82.0 -	88.0	0.00	0.0
Copper, ICPES	2	77.5 -	87.9	0.56	0.7
Lead, ICPES	1	66.5 -	66.5	2.12	3.2
Nickel, ICPES	2	83.0 -	88.9	1.17	1.4
Silver, ICPES	2	75.5 -	86.6	1.16	1.4
Sodium, ICPES	2	81.5 -	89.6	5.17	6.2
Zinc, ICPES	2	80.5 -	87.1	0.56	0.7
PCBs					
Analytical					
PCB-1016	4	ND -	ND	NC	NC
PCB-1221	4	ND -	ND	NC	NC
PCB-1232	4	ND -	ND	NC	NC

NC: Not Calculable

ND: NOt Detected

TABLE B.13 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = BET

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
PCB-1242	4	ND -	ND	NC	NC
PCB-1248	4	ND -	ND	NC	NC
PCB-1254	4	ND -	ND	NC	NC
PCB-1260	4	ND -	ND	NC	NC
field duplicate					
PCB-1016	3	ND -	ND	NC	NC
PCB-1221	3	ND -	ND	NC	NC
PCB-1232	3	ND -	ND	NC	NC
PCB-1242	3	ND -	ND	NC	NC
PCB-1248	3	ND -	ND	NC	NC
PCB-1254	3	ND -	ND	NC	NC
PCB-1260	3	ND -	ND	NC	NC
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	1	81.0 -	81.0	4.24	5.2
Dibutylchlorendate	1	73.5 -	73.5	3.54	4.8
PCB-1254	1	94.5 -	94.5	0.71	0.7
9040					
field duplicate					
pH	3	3.3 -	3.8	0.05	1.5
Metals, Cold Vapor					
field duplicate					
Mercury	3	ND -	ND	NC	NC
matrix duplicate					
Mercury	1	95.0 -	95.0	7.07	7.4
Predigestion					
Mercury	2	ND -	ND	NC	NC
D-1498					
field duplicate					
Eh	3	289 -	292	16.63	5.7

NC: Not Calculable
ND: NOt Detected

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TABLE B.13 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = BET

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, Graphite Furnace				
field duplicate				
Arsenic, graphite AA	3	0.0025 - 0.027	0.00	26.3
Selenium, graphite AA	3	ND - ND	NC	NC
Thallium, graphite AA	3	ND - 0.0015	0.00	47.1
matrix duplicate				
Arsenic, graphite AA	1	90.0 - 90.0	2.83	3.1
Lead, graphite AA	1	0 - 0	0.00	0.0
Selenium, graphite AA	1	86.0 - 86.0	0.00	0.0
Thallium, graphite AA	1	82.0 - 82.0	2.83	3.4
Predigestion				
Arsenic, graphite AA	1	0.22 - 0.22	0.01	6.4
Selenium, graphite AA	1	ND - ND	NC	NC
Thallium, graphite AA	1	ND - ND	NC	NC
Infrared Methods				
field duplicate				
Oil and grease, infrared	3	ND - ND	NC	NC
Total organic carbon	4	ND - 106	36.40	37.0
matrix duplicate				
Total organic carbon	5	88.0 - 112	2.83	3.0
Predigestion				
Oil and grease, infrared	4	2.1 - 9.0	0.72	9.2
Total organic carbon	4	61.0 - 190	7.19	4.4
Filterable Residue (TDS)				
field duplicate				
Filterable Residue (TDS)	3	35.0 - 435	13.54	15.8
Predigestion				
Filterable Residue (TDS)	4	99.0 - 1100	43.02	4.6

NC: Not Calculable
ND: NOt Detected

TABLE B 14 MATRIX SPIKE RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = BET

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	3	87.8	3.3	0	0	80.0 - 120.0
Antimony, ICPES	3	94.8	5.3	0	0	80.0 - 120.0
Barium, ICPES	3	88.1	2.1	0	0	80.0 - 120.0
Beryllium, ICPES	3	92.7	0.61	0	0	80.0 - 120.0
Cadmium, ICPES	3	88.7	2.3	0	0	80.0 - 120.0
Calcium, ICPES	3	94.5	4.8	0	0	80.0 - 120.0
Chromium, ICPES	2	90.2	0.92	0	0	80.0 - 120.0
Copper, ICPES	3	88.3	1.5	0	0	80.0 - 120.0
Lead, ICPES	3	87.5	2.5	0	0	80.0 - 120.0
Nickel, ICPES	3	90.9	0.23	0	0	80.0 - 120.0
Silver, ICPES	3	87.4	3.2	0	0	80.0 - 120.0
Sodium, ICPES	3	98.1	11.0	0	0	80.0 - 120.0
Zinc, ICPES	3	88.8	1.6	0	0	80.0 - 120.0
matrix spike						
Aluminum, ICPES	4	83.4	6.8	2	0	80.0 - 120.0
Antimony, ICPES	4	87.6	3.6	0	0	80.0 - 120.0
Barium, ICPES	4	85.3	3.8	0	0	80.0 - 120.0
Beryllium, ICPES	4	86.9	3.4	0	0	80.0 - 120.0
Cadmium, ICPES	4	82.6	3.6	1	0	80.0 - 120.0
Calcium, ICPES	4	89.5	3.1	0	0	80.0 - 120.0
Chromium, ICPES	4	85.1	3.3	0	0	80.0 - 120.0
Copper, ICPES	4	82.7	6.0	2	0	80.0 - 120.0
Lead, ICPES	2	89.5	2.1	0	0	80.0 - 120.0
Nickel, ICPES	4	86.0	3.5	0	0	80.0 - 120.0
Silver, ICPES	4	81.0	6.4	2	0	80.0 - 120.0

TABLE B.14 MATRIX SPIKE RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = BET

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Sodium, ICPES	4	85.5	6.3	1	0	80.0 - 120.0
Zinc, ICPES	4	83.8	3.8	0	0	80.0 - 120.0
PCBs						
matrix spike						
PCB-1254	2	94.5	0.71	0	0	29.0 - 131.0
Metals, Cold Vapor						
matrix spike						
Mercury	2	95.0	7.1	0	0	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	2	84.0	0	0	0	80.0 - 120.0
Lead, graphite AA	2	101.0	7.1	0	0	80.0 - 120.0
Selenium, graphite AA	2	84.0	0	0	0	80.0 - 120.0
Thallium, graphite AA	1	82.0		0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	2	90.0	2.8	0	0	80.0 - 120.0
Lead, graphite AA	2	.0	0	2	0	80.0 - 120.0
Selenium, graphite AA	2	86.0	0	0	0	80.0 - 120.0
Thallium, graphite AA	3	82.7	2.3	0	0	80.0 - 120.0
Infrared Methods						
matrix spike						
Total organic carbon	10	97.1	8.9	0	0	80.0 - 120.0

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TABLE B.15 SURROGATE SPIKE RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Pretreatment SUBMATRIX = BET

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	19	79.7	22.1	2	0	17.0 - 152.0
Dibutylchlorendate	19	77.3	11.9	0	0	20.0 - 150.0

TABLE B.16 BLANK RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Pretreatment BET					
Metals, ICPES					
BET Blank					
	Aluminum, ICPES	1	0		0.20
	Antimony, ICPES	1	0		0.20
	Barium, ICPES	1	0		0.010
	Beryllium, ICPES	1	0		0.0020
	Cadmium, ICPES	1	0		0.0050
	Calcium, ICPES	1	0		1.0
	Chromium, ICPES	1	0		0.030
	Copper, ICPES	1	0		0.020
	Lead, ICPES	1	0		0.050
	Nickel, ICPES	1	0		0.020
	Silver, ICPES	1	0		0.030
	Sodium, ICPES	1	0		1.0
	Zinc, ICPES	1	0		0.020
preparation					
	Aluminum, ICPES	4	0		0.20
	Antimony, ICPES	4	0		0.20
	Barium, ICPES	4	0		0.010
	Beryllium, ICPES	4	0		0.0020
	Cadmium, ICPES	4	0		0.0050
	Calcium, ICPES	4	4	1.3 - 2.0	
	Chromium, ICPES	3	0		0.030
	Copper, ICPES	4	0		0.020
	Lead, ICPES	4	0		0.050
	Nickel, ICPES	4	0		0.020
	Silver, ICPES	4	0		0.030
	Sodium, ICPES	5	5	2.0 - 3.2	
	Zinc, ICPES	4	0		0.020
PCBs					
BET Blank					
	PCB-1016	1	0		0.021
	PCB-1221	1	0		0.021
	PCB-1232	1	0		0.042
	PCB-1242	1	0		0.021
	PCB-1248	1	0		0.021

TABLE B.16 BLANK RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
PCBs					
BET Blank					
	PCB-1254	1	0		0.042
	PCB-1260	1	0		0.042
Reagent					
	PCB-1016	2	0		0.020
	PCB-1221	2	0		0.040
	PCB-1232	2	0		0.040
	PCB-1242	2	0		0.020
	PCB-1248	2	0		0.020
	PCB-1254	2	0		0.040
	PCB-1260	2	0		0.040
Metals, Cold Vapor					
BET Blank					
	Mercury	2	0		0.00020
preparation					
	Mercury	7	0		0.00020
Metals, Graphite Furnace					
BET Blank					
	Arsenic, graphite AA	1	1	0.0050 - 0.0050	
	Selenium, graphite AA	1	0		0.0050
	Thallium, graphite AA	1	0		0.0010
preparation					
	Arsenic, graphite AA	3	0		0.0020
	Lead, graphite AA	5	4	0.0030 - 0.0080	0.0020
	Selenium, graphite AA	3	0		0.0050
	Thallium, graphite AA	3	0		0.0020
Infrared Methods					
BET Blank					
	Oil and grease, infrared	1	0	-	0.40
	Total organic carbon	1	1	4.0 - 4.0	
preparation					
	Total organic carbon	8	8	1.0 - 2.0	

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TABLE B.16 BLANK RESULTS FOR PRETREATMENT BET LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Filterable Residue (TDS)						
BET Blank						
	Filterable Residue (TDS)	1	1	30.0	30.0	
analytical						
	Filterable Residue (TDS)	4	0			10.0

B.4 QUALITY CONTROL RESULTS FOR POST-TREATMENT SAMPLES

Post-treatment samples for the Soliditech project consisted of six submatrices: post-treatment solid samples, TCLP leachates, EP leachates, BET leachates, and ANS-16.1 leachates of post-treatment solid samples. Detailed results are presented in Tables A.5 through A.11. Summary tables are presented in the body of the Text. The following problems are associated with the post-treatment solid samples:

- Low matrix spike recoveries for some metals analyzed by ICPES and AA; and
- Poor recovery for acid fraction matrix spike and surrogate spike compounds analyzed by Method 8270.

Results are discussed in more detail below.

B.4.1 Post-Treatment Solid Samples

Post-treatment solid samples were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease by IR, and volatile and semivolatile organic compounds by GC/MS, pH, bulk density, Eh, unconfined compressive strength, water content, permeability, and loss on ignition. The following problems were associated with these analyses:

- Variability in the nickel matrix spike duplicate analyzed by ICPES;
- Low matrix spike recoveries for most metals analyzed by ICPES and AA;
- Low surrogate spike recoveries of toluene-d_8 and BFB for Method 8240 analysis; and

- Low recovery of acid-fraction matrix spike and surrogate spike compounds for Method 8270.

Quality control associated with these results includes duplicate analyses, spike analyses, surrogate spike analyses, and blank analyses. Results are presented in Tables B.17, B.18, B.19, and B.20, respectively. These results are discussed in more detail below.

Metals, ICPES

Post-treatment solid samples were analyzed for metals by ICPES. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. Results for these tests are presented in Tables B.17, B.18, and B.20. Problems associated with these analyses include the variability in the nickel matrix spike duplicate analyses and the low matrix spike recoveries for most of the metals. This is discussed in detail below.

Two types of duplicate analyses were performed with these samples, matrix spike duplicate analyses and predigestion duplicate analyses. Only the results for nickel (31.2% CV) exceed the acceptance criteria of less than twenty percent CV. These results suggest that results for nickel are more variable than would have been liked.

One method spike sample and two matrix spiked samples were analyzed for metals by ICPES. Only thallium was inside the acceptance criteria for both matrix spike samples. Mean recoveries for these samples averaged sixty-five percent, which suggests that field sample results for these analyses may be biased low.

One preparation blank was analyzed with these samples. Sodium was detected in the preparation blank at less than one and a half times the detection limit (1 mg/L). These results do not indicate significant contamination problems.

Metals, Cold Vapor AA

Post-treatment solid samples were analyzed for mercury by cold vapor AA. Quality control tests associated with these tests include duplicate analyses, spike analyses and blank analyses. Both matrix spike samples had recoveries below the acceptance criteria.

Two types of duplicate analyses were performed, matrix spike duplicates and predigestion duplicates. Nothing was detected in the pre-digestion duplicate sample; therefore, no conclusions can be drawn from this sample. The repeatability for the two matrix spike duplicate pairs was quite good (less than 2% CV). There are no problems associated with these results.

Four matrix spike samples were analyzed for mercury. Results for all of the spiked samples were below acceptance criteria, which suggests that field results for mercury may be biased slightly low.

Three preparation blanks were analyzed with these samples. Nothing was detected in any of them.

Metals, Graphite Furnace AA

Arsenic, selenium and thallium in post-treatment samples were analyzed by graphite furnace AA. Quality control tests associated with these analyses include duplicate analyses, spike analyses and blank analyses. Matrix spike results for arsenic, selenium and thallium suggest that field recoveries may be severely underestimated. These results are discussed in detail below.

Matrix spike duplicate results for these analyses show acceptable repeatability for arsenic and selenium. Variability of thallium (33% RPD) was slightly higher than expected. There are no problems indicated by these results.

One method spike was analyzed for arsenic, selenium, and thallium. The recoveries for these samples were all within acceptance criteria. Four spikes were analyzed for arsenic, and six for selenium and thallium. Arsenic and selenium were not recovered in two of the samples. Mean percent recovery for all three metals was below 50%.

One preparation blank was analyzed for each element. Nothing was detected in this blank.

PCBs

Post-treatment solid samples were analyzed for PCBs by GC using EPA Method 8080. Quality control tests associated with these analyses include duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. A second matrix spike/matrix spike duplicate was extracted and analyzed. Recovery of one matrix spike compound, Aroclor-1254 was diluted out past the point of recovery in the matrix spike duplicate pair. The recoveries for the matrix spike compound, Aroclor-1260, was well within the acceptance criteria. Recovery of Aroclor-1254 in the method spike was within acceptance criteria. Dibutylchlorendate, a surrogate compound, was lost in 21 of the 30 samples due to silica gel cleanup. These results are discussed in detail below.

Two types of duplicate samples were analyzed for PCBs in post-treatment solids: analytical duplicates and matrix spike duplicates. Variability in the analytical duplicate was less than 5% CV for the two compounds, Aroclor-1242 and Aroclor-1260, detected in the samples, which is quite good. Variability in the matrix spike duplicate sample was less than 10% CV for Aroclor-1254 and Aroclor-1260.

Two matrix spike samples were analyzed with the post-treatment samples. Recovery of Aroclor-1260 was well within the acceptance criteria for two of the matrix spike samples. Recovery of Aroclor-1254 is low since the sample was diluted. The method spike in the laboratory showed that Aroclor-1254 can be recovered within acceptance criteria.

Two surrogate compounds were added to all of the samples analyzed by Method 8080. In all 22 samples analyzed, dibutylchlorendate was lost due to silica gel cleanup. However, recovery of the second surrogate compound, 2,4,5,6-tetrametaxylene was within acceptance criteria for all samples. It is reasonable to assume that recoveries for the field samples are reliable.

Two reagent blanks were analyzed with these samples. Nothing was detected in either one of them.

Oil & Grease

Oil and grease in post-treatment solid samples was analyzed by infrared spectroscopy. Quality control tests associated with these analyses include duplicate analyses, and spike analyses. There were no problems indicated by these results.

Two types of duplicate sample were analyzed for this method: matrix spike duplicates and predigestion duplicates. The repeatability for both types of sample was less than 10% CV, which is quite good.

Two matrix spike samples were analyzed with these samples. These samples were spiked at an inappropriate level and nothing was recovered.

Volatile Organic Compounds

Post-treatment solid samples were analyzed for volatile organic compounds by GC/MS using Method 8240. Quality control tests associated with these analyses include: duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. Surrogate spike recoveries were low for bromofluorobenzene (BFB) in 9 of 12 samples, and low for toluene-d_8 in 12 of 13 samples. These results are discussed in detail below.

One matrix spike duplicate pair was analyzed for the post-treatment solids. The repeatability of the analysis as measured by CV is less than 25% for all five matrix spike compounds. This is well within the acceptance criteria specified by the QAPP.

Two matrix spike samples were analyzed as a measure of accuracy. Both of the samples had recoveries within the acceptance criteria specified by the QAPP for all five matrix spike compounds. No problems are indicated by these results.

However, surrogate spike results for these samples show that recovery of the target compounds may be biased slightly low. The mean percent recovery for BFB is 80.5% which is slightly lower than the acceptance criteria of 86 to 115% specified by the QAPP. Nine of the fifteen samples analyzed had recoveries below the acceptance criteria. Mean recovery of toluene-d_8 was 30% below the acceptance criteria of 88 to 110%. Twelve of fifteen samples were below the acceptance criteria.

Nothing was detected in the reagent blank analyzed with the samples.

Semivolatile Organic Compounds

Post treatment leachate samples were analyzed for semivolatile organic compounds by GC/MS using Method 8270. Quality control data associated with these analyses include matrix spike duplicate analyses, matrix spike analyses, surrogate spike analyses and blank analyses. Recoveries of the acid-fraction matrix and surrogate spikes were low. Recovery for phenol-d_5 was high in one of the seventeen samples. Semivolatile organic compounds were detected in the pre-demonstration sample scraped from inside of the Soliditech mixer, prior to treatment of the site. Detailed results are presented below.

The variability in the samples and analysis as measured by the coefficient of variation of the matrix spike duplicate samples was less than 20% for all seven compounds. No problems are indicated by these analyses.

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Matrix spike recovery was below the acceptance criteria for the acid fraction matrix spike compounds. Mean recoveries for 2-chlorophenol (0.5%) was below the acceptance criteria of 23 - 134% recovery, pentachlorophenol (0%) was below the acceptance criteria of 14 - 176% recovery and p-chloro-m-cresol (8%) was below the acceptance criteria of 22 - 147%. Recoveries for the other eight compounds were within acceptance criteria for both samples.

Additionally, surrogate spike sample recoveries were below acceptance criteria for acid-fraction compounds: 2,4,6-tribromophenol in 4 of 17 samples, for 2-fluorophenol in 4 of seventeen samples and in phenol-d_5 in 2 of 17 samples. These results suggest that the acid fraction in the Soliditech samples may be slightly underestimated. However, recovery for phenol-d_5 in 1 of 17 samples was above the acceptance criteria.

Two types of blank were analyzed with the semivolatile samples: a reagent blank and scrapings of the mixer. Nothing was detected in the reagent blank. In the pre-demonstration scrapings, acenaphthene, chysene, di-n-butylphthalate, dibenzofuran, fluoranthene, fluorene, hexachlorobutadiene, isophorone, pyrene, and bis(2-ethylhexyl)phthalate were detected. These scrapings are not considered a source of contamination in this demonstration because the concentration of semivolatile organics found were low and the amount of residue was small compared to the amount of waste being treated.

pH

One field duplicate sample was analyzed for pH. Results were good, with a repeatability of <1% CV.

Bulk Density

Eighteen field duplicate sample pairs were analyzed. Repeatability of these samples was good (0.8% CV).

Eh

One field duplicate sample was analyzed for Eh. Repeatability of this samples was 2% CV, which is good.

Unconfined Compressive Strength

Eighteen field duplicate pairs were analyzed for unconfined compressive strength. Repeatability was less than 20% CV.

Water Content

Eighteen field duplicate sample pairs were analyzed for water content. Repeatability was less than 11% CV.

Permeability

One field duplicate pair was analyzed for permeability. The repeatability was 9.8% CV.

Loss on Ignition

One predigestion duplicate pair was analyzed for LOI. The reproducibility of this analysis was excellent (0% CV).

B.4.2 Post-Treatment TCLP Leachate Samples

Post-treatment TCLP leachate samples were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease and total organic compounds by IR, volatile organic compounds and semivolatile organic compounds by GC/MS, pH, Eh, and filterable residue. Quality control tests associated with these methods include duplicate analysis, spike samples, surrogate samples, and

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blank analyses. Results are presented in Tables B.21, B.22, B.23, and B.24, respectively. Problems with these analyses are listed below:

- Matrix spike recoveries outside the acceptance criteria for some metals analyzed by ICPES and AA;
- Variability in arsenic and selenium matrix spike duplicate results by AA;
- Acetone, 4-methyl-2-pentanone and tetrachloroethylene were detected in the TCLP blank; and
- Poor recovery for acid-fraction matrix and surrogate spike compounds by Method 8270.

These results are discussed in detail below.

Metals, ICPES

TCLP leachates of post-treatment samples were analyzed for metals by ICPES. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. Problems associated with these analyses include high variability in the field duplicate sample analyzed for copper. Recoveries outside the acceptance criteria were reported for matrix spikes of antimony, cadmium, lead, nickel, silver, and zinc. Calcium, silver and sodium were detected in the blanks.

Two types of duplicate sample were analyzed for metals. One pair of field duplicate samples was analyzed. The repeatability for this analyses was less than 15% for aluminum barium, chromium, and sodium. However, for copper, the variability was 63% CV. These results indicate that there was some non-homogeneity of the sample matrix. Matrix spike duplicate results for all the metals were quite good. The repeatability was less than 10% for all metals including copper.

Two method spike samples were analyzed for these metals. Recoveries were all within acceptance criteria. Eight matrix spike samples were analyzed. Recoveries for antimony, cadmium, lead, nickel, silver, and zinc were all below the acceptance criteria. Only for lead (72.3%) was the mean percent recovery below the acceptance criteria.

Both TCLP blanks and preparation blanks were analyzed for metals. Calcium was detected in both the TCLP leachate blank and the five preparation blanks. All six results are less than three times the detection limit. Sodium was detected in four of four preparation blanks at two times the detection limit, and silver was detected in one of two preparation blanks at slightly over the detection limit. Copper and silver were detected in one of five preparation blanks at slightly over the detection limit. These low levels of analytes should not be considered a significant source of contamination.

Metals, Cold Vapor AA

Mercury in TCLP leachates of post-treatment soil was analyzed by cold vapor AA. Quality control tests associated with this method include duplicate analyses, spike analyses, and blank analyses. There were no problems associated with these results.

Three types of duplicates (field, matrix spike, and predigestion) were analyzed for mercury. Nothing was detected in the field duplicate pair. The repeatability for the other two types of duplicate was quite good, less than 5% CV.

Recoveries for the four matrix spike samples were within the acceptance criteria specified by the QAPP.

One TCLP leachate blank and eighteen preparation blanks were analyzed for mercury. Mercury was detected in one of the preparation blanks at the detection limit (0.0002 mg/L). This level of mercury should not be considered a significant source of contamination.

Metals, Graphite Furnace AA

Arsenic, lead, selenium and thallium were analyzed by graphite furnace AA for TCLP leachates of post-treatment samples. Quality control tests associated with these tests include duplicate analyses, spike analyses, and blank analyses. Problems associated with these analyses include: poor repeatability for arsenic and selenium in the matrix spike duplicate, and low recoveries for matrix spike samples for arsenic, lead, selenium, and thallium.

Two types of duplicate analyses were performed. Only arsenic was detected in the one field duplicate pair analyzed. The repeatability for this test was quite good, less than 5% CV. Repeatability for arsenic and selenium in matrix spike duplicate samples did not meet the acceptance criteria (20%) specified in the QAPP. In six matrix spike duplicate pairs, the variability for arsenic was 58% CV, and for selenium was 83% CV. Results for lead and thallium are acceptable (less than 15% CV).

Eight matrix spike samples were analyzed for arsenic, selenium, and thallium. Six of the arsenic recoveries, and all eight of the selenium and thallium recoveries were below acceptance criteria. Four matrix spike samples were analyzed for lead. Recovery for one matrix sample was below the acceptance criteria. Mean percent recoveries suggest that results for arsenic may be biased low by 40%, selenium 90%, and thallium 65%.

One TCLP leachate blank and six preparation blanks were analyzed with these samples. Nothing was detected in any of the blanks.

PCBs

Post-treatment TCLP leachate samples were analyzed for PCBs by GC using Method 8080. Quality control tests associated with this method include duplicate analyses, spike analyses, surrogate spike analyses, and blank analyses. There were no problems associate with these analyses.

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Three different kinds of duplicates were analyzed with these samples: field duplicates, analytical duplicates, and matrix spike duplicates. Nothing was detected in the field or analytical duplicate, therefore, no conclusions can be drawn from these samples. One pair of matrix spike duplicate samples was analyzed. Repeatability as measured by the coefficient of variation was 5.4%, well within the acceptance criteria of 50% CV.

Two matrix spike samples were analyzed. Mean recovery for these samples is 117.5%. This result is within the acceptance criteria of 29 - 131% recovery. There were no problems associated with these samples.

All seventeen samples were spiked with surrogate compounds, 2,4,5,6-tetrachlorometaxylene and dibutylchlorendate. Recovery for both compounds in all seventeen samples was within the acceptance criteria.

One TCLP leachate blank and two reagent blanks were analyzed with these samples. Nothing was detected in the blanks.

Oil & Grease and TOC

TCLP leachates of post-treatment samples were analyzed for oil & grease and total organic carbon (TOC) by infrared spectroscopy. Quality control results associated with these tests include duplicate analyses, and blank analyses. There were no problems associated with these samples.

One field duplicate pair and one predigestion duplicate pair of samples was analyzed for oil and grease in TCLP leachates. Repeatability was less than 10% CV for both pairs.

One TCLP blank was analyzed for oil and grease. Nothing was detected in the oil and grease sample.

Volatile Organic Compounds

TCLP leachates of post-treatment samples were analyzed for volatile organic compounds by GC/MS using Method 8240. Quality control results associated with these tests include duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. The only problem associated with these samples is slight contamination in the TCLP blank. Three compounds were detected in the TCLP blank: 4-methyl-2-pentanone, acetone, and tetrachloroethylene. Chloroform was detected in the system blank. None of these compounds should cause serious contamination since they are all less than 3 times the detection limit. Detailed results are presented below.

Two types of duplicates, analytical and matrix spike, were analyzed for this method. Duplicate results for the analytical duplicate agreed within 45% CV which is within the acceptance criteria specified by the QAPP. Duplicate results for the matrix duplicate sample agreed within 10% CV, which is quite good.

Four matrix spike samples were analyzed for a measure of accuracy for this method. All five spike compounds in all four samples were within acceptance criteria, which shows good repeatability for this matrix.

All seventeen samples were spiked with three surrogate spike compounds. All of the surrogate recoveries were within acceptance criteria.

Two types of blanks were analyzed for this analyses, TCLP leachate blanks and a system blank. Three compounds, 4-methyl-2-pentanone, acetone, and tetrachloroethylene, were detected in the TCLP leachate blank slightly above the detection limit. One compound, chloroform, was detected in the system blank slightly above the detection limit. None of these compounds should be considered as a significant source of contamination since the levels are so low.

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Semivolatile Organic Compounds

Post-treatment TCLP leachates were analyzed for semivolatile organic compounds by GC/MS using Method 8270. Quality control tests associated with this method include duplicate analyses, spike analyses, surrogate spike analyses, and blank analyses. Problems associated with this matrix include variability in matrix spike duplicate analysis, recovery outside the acceptance criteria for matrix spike and surrogate compounds, and bis(2-ethylhexyl)phthalate was detected in the reagent blank. These results will be discussed in detail below.

Two different types of duplicate samples, field duplicates and matrix spike duplicates, were analyzed for these analyses. In the field duplicate sample, repeatability was within 25% CV, except for 2,4-dimethylphenol (63% CV). These results are acceptable considering the matrix. Repeatability in the matrix spike duplicate sample was within 20% CV for all compounds but pentachlorophenol (100% CV).

Four matrix spike samples were analyzed. Recoveries for pentachlorophenol in two of the four samples were below the acceptance criteria (14 - 176% recovery). Recoveries for phenol and p-chloro-m-cresol were above the acceptance criteria for one sample in four.

All eighteen samples were spiked with twelve surrogate spike compounds. Recoveries for one of eighteen samples were below the acceptance criteria for 2,4,6-tribromophenol and phenol-d_5. Seven of the eighteen recoveries for 2-fluorophenol were below the acceptance criteria (21 - 100% recovery) and ten of the eighteen recoveries were above the acceptance criteria. These results suggest that recoveries for phenols in TCLP leachate solution are more variable than desired.

Three blank samples were analyzed for Method 8270 analyses of TCLP leachates. One blank was a TCLP leachate blank and the other two blanks were reagent blanks. In one of the reagent blanks, bis(2-ethylhexyl)phthalate was detected at two and a half times the detection limit (10 ug/L). Phthalates

are common laboratory contaminants and at this level should not be considered a significant source of contamination.

pH

One field duplicate sample was analyzed for pH. Repeatability was less than 0.1% CV, which is good.

Eh

One field duplicate sample was analyzed for Eh. The repeatability was 7.3% CV.

Filterable Residue

TCLP leachates of post-treatment soils were analyzed for filterable residue. Quality control tests associated with this method include duplicate analysis and blank analysis. There were no problems associated with this method.

Two types of duplicate analysis were performed for this method. Repeatability of TDS as measured by CV was 0.5% for the field duplicate sample and 1.7% for the predigestion duplicate sample. These results are excellent.

Two types of blank were analyzed with these samples. Results for the analytical blank ranged from 7.4 mg/L to 16.0 mg/L. Results for the TCLP blank were 29 mg/L. Results near this level may be considered blank contamination.

B.4.3 EP Leachates of Post-Treatment Samples

EP leachates of post-treatment samples were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease, pH, Eh, and filterable residue. Quality control tests associated with these methods include duplicate

analysis, spike analyses, surrogate spike analyses, and blank analyses. Results are presented in Tables B.25, B.26, B.27, and B.28, respectively. Problems associated with these analyses include:

- Variability of selenium in matrix spike duplicates analyzed by AA; and

- Matrix spike recoveries for selenium and thallium by AA.

These results are discussed in detail below.

Metals, ICPES

Metals analyses were performed using an ICPES for EP leachates of post-treatment samples. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. No problems were noted with these analyses.

One field duplicate pair and four matrix duplicate pairs were analyzed. Repeatability for all analyses was less than 15% for all the metals. No problems are indicated by these results.

All of the method spike samples were recovered within acceptance criteria. Low matrix spike recoveries were reported for antimony, beryllium, cadmium, chromium, copper, lead, nickel, and zinc. The mean percent recovery for these samples was acceptable for all metals.

One EP extraction blank and two preparation blanks were analyzed with these samples. Calcium and copper were detected in both types of blank. Aluminum and zinc were detected in one of the preparation blanks, and sodium was detected in both preparation blanks. None of these results is greater than three times the detection limit. At such low concentrations, these metals are not considered significant sources of contamination.

Metals, Cold Vapor AA

EP extractions of post-treatment samples were analyzed for mercury by cold vapor AA. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. No problems were indicated by these results.

One field duplicate pair and two matrix spike duplicate pairs were analyzed for mercury. Nothing was detected in the field duplicate and so these results cannot be evaluated. Repeatability for mercury in the matrix spike duplicate pairs was quite good, less than 2% CV. These results are well within the acceptance criteria of 20% CV.

Four matrix spike samples of four were recovered within acceptance criteria.

One EP extraction blank and two preparation blanks were analyzed for mercury. Nothing was detected in any of these samples.

Metals, Graphite Furnace AA

Arsenic, lead, selenium, and thallium were analyzed by graphite AA for EP extracts of post-treatment solids. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. Problems associated with these results include poor repeatability for thallium in field duplicates and poor repeatability for selenium in matrix spike duplicates and low matrix spike recovery for selenium and thallium. These results are discussed in detail below.

One field duplicate pair was analyzed for arsenic, selenium, and thallium. Repeatability for arsenic and selenium was excellent. Repeatability for thallium was 47% CV, however, thallium was detected in these samples at very low levels and more variability is expected at low levels. One matrix spike duplicate pair was analyzed for lead, three matrix spike duplicate pairs were analyzed for arsenic and four matrix spike duplicate

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pairs were analyzed for selenium and thallium. Variability for arsenic, lead, and thallium was good (less than 10% CV). Variability for selenium was quite high (100% CV).

All of the method spike recoveries were within acceptance criteria specified by the QAPP. Low recoveries were reported in all eight of the matrix spike samples for selenium and thallium. Mean percent recoveries for these samples suggests the values reported for the field samples may be biased low by 80 percent. Matrix spike recoveries for arsenic were low for four sample and high for two samples. The mean percent recovery for arsenic is 102%.

PCBs, 8080PC

EP extracts of post-treatment samples were analyzed for PCBs by GC using Method 8080. Quality control tests associated with this method include duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. Problems associated with this method include high recovery for one matrix spike compound, and low recovery for surrogate spikes in one sample. These problems are discussed in detail below.

Two analytical duplicates and one field duplicate were analyzed for PCBs. Nothing was detected in any of these samples and so no conclusions can be drawn from them. Two matrix spike duplicate pairs were analyzed for Aroclor-1254. The repeatability as measured by CV was less than 5%, which shows low variability.

Four matrix spike samples were analyzed for Method 8080. One of these samples had a recovery slightly above the acceptance criteria of 29 - 131% recovery. The mean percent recovery of 119% suggests that Aroclor results for this matrix may be biased slightly high.

All seventeen samples were spiked with surrogate compounds, 2,4,5,6-tetrachlorometaxylene and dibutylchlorendate. One sample had low recovery for both surrogates. However, recoveries for the other sixteen samples were within specifications; therefore, low recovery for one sample should not be a major concern.

Oil & Grease, Infrared

Post-treatment EP extract samples were analyzed for oil and grease by infrared spectroscopy. Quality control results for this test include duplicate analysis and blank sample analyses. There were no problems associated with these analyses.

One field duplicate pair and one predigestion duplicate pair were analyzed for oil & grease. Repeatability as measured by CV was less than 10% CV for both analyses.

One EP extraction blank and two analytical blanks were analyzed with these samples. Nothing was detected in these samples.

pH

One field duplicate pair was analyzed for pH. Repeatability was 0.9% CV for this analysis.

Eh

One field duplicate pair was analyzed for Eh. Repeatability was high (275% CV).

Filterable Residue

EP leachates of post-treatment samples were analyzed for filterable residue. Quality control tests associated with these results include duplicate analyses and blank analyses. Blank results indicate that 67 mg/L is

the background for this analyses. These results are discussed in detail below.

A field duplicate pair and two predigestion duplicate pairs were analyzed for TDS. Low variability in these samples was indicated since the CV for all samples is below 5%.

One EP leachate blank and three analytical blanks were analyzed for TDS. The analytical blank results ranged from 6 mg/L to 24 mg/L. However, the EP leachate blank result is 67 mg/L, therefore results lower than this are not expected.

B.4.4 BET Leachates of Post-Treatment Samples

BET leachates of post-treatment samples were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease and TOC by IR, and filterable residue. Quality control tests associated with these results include duplicate analyses, spike analyses, surrogate spike analyses and blank analyses. Results of these tests are presented in Tables B.29, B.30, B.31 and B.32. Problems associated with these methods include:

- Low matrix spike recoveries for arsenic, selenium and thallium by AA.

Detailed results are presented below.

Metals, ICPES

BET leachates of post-treatment samples were analyzed for metals using an ICPES. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. High variability in the field duplicate sample was noted. These results are discussed in detail below.

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Three field duplicate pairs and seven matrix duplicate pairs were analyzed. Variability in the matrix duplicate pairs was low (5% CV or less) for all of the metals. Variability in the field duplicates was high for copper (42% CV), lead (85% CV), and nickel (28% CV). These results suggest that the matrix was non-homogeneous.

Two method spike samples were analyzed. All of the recoveries were within acceptance criteria. Recoveries were below acceptance criteria for two of sixteen samples analyzed for antimony, and one of twelve samples analyzed for lead. The mean percent recovery for these samples was within the acceptance criteria. Therefore, these low recoveries do not show any indication of bias.

At least three preparation blanks were analyzed for each metal. Calcium was detected at low levels in five of six preparation blanks. Sodium was detected at low levels in two of three preparation blanks. Lead and nickel were detected at slightly above the detection limit in one of three samples. These low levels of metals (less than three times the detection limits) are not considered a significant source of contamination.

Metals, Cold Vapor AA

Mercury in BET leachates of post-treatment samples was analyzed by cold vapor AA. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. No problems were noted with these analyses.

Three field duplicate pairs and four predigestion duplicate pairs were analyzed for mercury. Since nothing was detected in these samples, no evaluations can be made. Six matrix spike duplicate pairs were also analyzed. Repeatability was quite good (less than 3%) for this matrix.

Two of the twelve matrix samples analyzed for mercury were above the acceptance criteria and two were below the acceptance criteria. The one method spike analyzed was within the acceptance criteria. There are no problems indicated by these analyses.

Nothing was detected in the twenty-one preparation blanks analyzed with these samples.

Metals, Graphite Furnace AA

Arsenic, lead, selenium, and thallium were analyzed by graphite furnace AA for BET leachates of post-treatment solids. Quality control tests associated with these analyses include duplicate analyses, spike analyses, and blank analyses. The following problems were noted: Low matrix spike recoveries for arsenic, selenium, and thallium.

Three field duplicate pairs were analyzed for arsenic, selenium and thallium. Only arsenic was detected in these samples. Repeatability for arsenic was good (15% CV), especially for a field duplicate sample. Six matrix spike duplicate pairs were analyzed for arsenic, and seven matrix spike duplicate pairs were analyzed for selenium and thallium. Repeatability was good for all three metals (less than 10% CV).

One method spike sample in four was outside the acceptance criteria for selenium. The method spikes analyzed for arsenic and thallium were within acceptance criteria. High recovery was reported for two of twelve selenium spikes. Low recoveries were reported for four of twelve arsenic matrix spike, eight of fourteen selenium matrix spikes, and eight of fourteen thallium matrix spikes. The mean percent recovery for arsenic, selenium and thallium suggests that the values reported for the field samples may be biased about 20% low.

Nothing was detected in the five preparation blanks analyzed for arsenic and thallium, or in the six preparation blanks analyzed for selenium. Lead (0.003 mg/L) was detected in one preparation blank at slightly above the

detection limit (0.002 mg/L). This low level of lead should not be considered a significant source of contamination.

PCBs

BET leachates of post-treatment samples were analyzed for PCBs by Method 8080. Quality control tests associated with this method include duplicate analyses, spike analyses, surrogate spike analyses, and blank analyses. The only problems associated with this analyses were variable results for TCMX in 4 of 47 surrogate spike analyses. These results are discussed in detail below.

Four pairs of analytical duplicates, three pairs of field duplicates, and two pairs of matrix spike duplicates were analyzed with these samples. Nothing was detected in any of the analytical or field duplicates and so those results can not be evaluated. The repeatability of this analysis as measured by the coefficient of variation of the matrix spike duplicate pairs is very good. The CV for this analyses was 5.3%, well within the acceptance criteria of 50%.

None of the six matrix spike samples was outside the acceptance criteria of 29 - 131% recovery. No problems were indicated by these results.

Forty-seven samples were spiked with two surrogate compounds. Recovery for dibutylchlorendate was inside the acceptance criteria of 20 - 150% for all the samples. Recoveries of 2,4,5,6-tetrachlorometaxylene for 3 of 47 samples were below the acceptance criteria 17 - 152%. Recovery of TCMX in one sample was above the acceptance criteria. Because the recoveries of dibutylchlorendate were inside the acceptance criteria, the more variable recoveries for TCMX should not be of great concern.

Two reagent blanks were analyzed with these samples. Nothing was detected in either blank.

Oil & Grease and TOC

Oil & grease and TOC in BET leachates of post-treatment samples were analyzed by infrared spectroscopy. Quality control samples associated with these tests include duplicate analyses, matrix spike analyses, and blank analyses. There were no major problems associated with these results.

Three field duplicate pairs and four predigestion duplicate pairs were analyzed for oil & grease by infrared. The variability of oil & grease in field duplicates is 27% CV which is acceptable for a field sample. The variability of the predigestion duplicate pairs is 1.8% CV which is quite good. Three field duplicate pairs, three matrix spike duplicate pairs and two predigestion duplicates were analyzed for total organic carbon. The variability for these analyses as measured by coefficient of variation is less than 6% for all three types.

Eight matrix spike samples were analyzed for TOC. Two of the recoveries were above the acceptance criteria of 80 - 120%. One method spike was analyzed for TOC. Recovery was inside the acceptance criteria.

Three analytical blanks were analyzed for oil & grease by IR. Nothing was detected in any of them. Seventeen preparation blanks were analyzed by IR for total organic carbon. In fifteen samples, the recovery ranged between 1 and 1.9 mg/L TOC. However, since 1.9 is less than two times the detection limit, these results should not be considered serious contamination.

Filterable Residue

BET leachates of post-treatment samples were analyzed for filterable residue. Quality control tests associated with these results include duplicate analyses and blank analyses. There were no problems with these analyses. Three field duplicate pairs and three predigestion duplicates were analyzed for TDS. Repeatability of the field duplicate pairs was quite good, 6.1% CV. Repeatability of the predigestion duplicate was even better, 0.4%

CV. Two analytical blanks were analyzed for TDS. Nothing was detected in either blank.

B.4.5 ANS 16.1 Leachates of Post-Treatment Samples

ANS 16.1 leachates of post-treatment samples were analyzed for metals by ICPES and AA, PCBs by GC, oil & grease and TOC by IR, and filterable residue. Quality control results associated with these analyses include duplicate analyses, spike sample analyses, surrogate spike analyses, and blank analyses. Results are presented in Tables B.33, B.34, B.35, and B.36, respectively. Problems associated with these analyses are summarized below:

- Low matrix spike recoveries for lead by AA; and
- Calcium and sodium were detected in the preparation blank.

Results are discussed in detail below.

Metals, ICPES

Metals analyses by ICPES were performed on ANS 16.1 leachates of post-treatment solids. Quality control tests associated with this method include duplicate analyses, spike analyses, and blank analyses. These results are discussed in detail below.

Five field duplicate samples were analyzed for this matrix. Variability was greater than desired for aluminum (34.1% CV), silver (38.6% CV) and zinc (113.2% CV). Since the results for the five matrix spike duplicate pairs are within 10% CV for all metals, the high variability is probably due to non-homogeneity of the sample matrix.

All of the method spike recoveries for this analysis were within acceptance criteria. Low matrix spike recoveries were reported for 1 of 10 aluminum samples, 2 of 10 antimony samples, 3 of 10 barium samples, 1 of 10 beryllium samples, 4 of 10 cadmium samples, 4 of 10 chromium samples, 3 of 10 copper samples, 2 of 8 lead samples, 4 of 10 nickel samples, 3 of 10 silver

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samples, and 4 of 10 zinc samples. However, the mean spike recovery for all of these metals was within the acceptance criteria.

Calcium was detected in eight of eight preparation blanks, sodium was detected in seven of eight preparation blanks, and silver was detected in two of seven preparation blanks. Since none of these metals is present at greater than three times the detection limit, they should not be considered a significant source of contamination.

Metals, Cold Vapor AA

Mercury was analyzed by cold vapor AA for ANS 16.1 leachates of post-treatment samples. Quality control tests associated with this analysis include duplicate analysis, spike analyses, and blank analyses. There were no problems associated with these analyses.

Ten field duplicate pairs were analyzed for mercury. Variability in these samples was higher than expected (47% CV). Three predigestion duplicate pairs and four matrix duplicate pairs were also analyzed. The variability for both of these types of duplicates was quite low (2% CV). No problems are indicated by these results.

All eight of the matrix spike samples were recovered within acceptance criteria. There were no problems associated with these results.

Nothing was detected in the sixteen preparation blanks analyzed with these samples.

Metals, Graphite Furnace AA

Arsenic, lead, selenium, and thallium were analyzed by graphite furnace AA for ANS 16.1 leachates of post-treatment samples. Quality control tests associated with this analysis include duplicate analyses, spike analyses, and blank analyses. Recovery below the acceptance criteria was reported for both of the matrix spike samples analyzed for lead. These results are discussed in detail below.

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Five field duplicate pairs of samples were analyzed, however, nothing was detected in these samples. Therefore, no conclusions can be drawn. Four matrix duplicate pairs of samples were analyzed for arsenic and selenium, five pairs of matrix spike duplicate samples were analyzed for thallium, and one pair of matrix spike duplicate samples was analyzed for lead. Repeatability of these samples as measure by CV was excellent, less than 5% for all four metals.

All of the method spike results were within acceptance criteria. Four of the ten thallium results were less than the acceptance criteria, but the mean percent recovery was within the acceptance criteria. Both of the lead spikes were outside the acceptance criteria. Results suggest that lead may be biased low.

Four preparation blanks were analyzed for arsenic, three preparation blanks were analyzed for thallium, and two preparation blanks were analyzed for selenium. Thallium was detected in one of three blanks at the detection limit. Arsenic and selenium were not detected. These low levels of thallium should not be considered a significant source of contamination.

PCBs

ANS 16.1 leachates of post-treatment samples were analyzed for PCBs by GC using Method 8080. Quality control results associated with these tests include duplicate analyses, matrix spike analyses, surrogate spike analyses, and blank analyses. Problems with these samples include high variability for matrix spike duplicates, poor recovery for 1 of 6 matrix spike samples, and low recovery for both surrogate compounds in one sample. If the one sample which had low matrix and surrogate spike recoveries is thrown out of the data set, then all QC data meet the acceptance criteria specified by the QAPP. The third matrix duplicate pair was analyzed so that the three normal results could be verified. The extraction lab speculates that the sample was bumped or spilled during preparation. If this sample is discounted, there are no problems with this matrix.

The matrix spike duplicate analyzed for this matrix meet the acceptance criteria specified by the QAPP. Three analytical duplicate pars and five field duplicate pairs were analyzed also. However, nothing was detected in these samples and so no conclusions about the samples can be drawn.

Discounting the matrix spike sample with the unusual recovery, all five of the matrix spike samples were within the acceptance criteria specified by the QAPP.

Of the fifty normal samples spiked with the two surrogate compounds, all were within the acceptance criteria specified the QAPP.

Nothing was detected in the three reagent blanks analyzed with these samples.

Oil & Grease, and TOC

ANS 16.1 leachates of post-treatment soil were analyzed for oil & grease, and TOC by infrared spectroscopy. Quality control results associated with these tests include duplicate analyses, matrix spike analyses, and blank analyses. There are no major problems associated with these results.

Five field duplicate pairs and three predigestion duplicate pairs were analyzed for oil & grease by infrared. Nothing was detected in the field duplicate pairs and so no conclusions can be drawn using this data. The variability of this method measured by coefficient of variation of matrix spike duplicate pairs is 4.1%, which is quite good. Five field duplicate pairs, five matrix duplicate pairs, and six predigestion duplicate pairs were analyzed for TOC. The coefficient of variation for the field duplicate pairs is 9.7, for the matrix duplicate pairs is 2.0 and for the predigestion pairs in 4.3. These results are quite good.

The method spike analyzed for TOC was within acceptance criteria. Ten matrix spike samples analyzed for TOC were within acceptance criteria. No major problems are suggested by these results.

Four analytical blanks were analyzed for oil & grease. Nothing was detected in them. Fourteen preparation blanks were analyzed for TOC. Results for thirteen of these samples ranged from 1 to 1.9 mg/L, which is less than two times the detection limit.

Filterable Residue

ANS 16.1 leachates of post-treatment soils were analyzed for filterable residue. Quality control tests associated with this method include duplicate analysis and blank analysis. There were no problems associated with these results.

Nine field duplicate pairs and six predigestion duplicate pairs were analyzed for TDS. The repeatability of this analysis as measured by the coefficient of variation is 5.1% CV for the field duplicate pairs and 1.7% for the predigestion duplicate pairs. This is well within the acceptance criteria of 20% CV specified by the QAPP.

Five analytical blanks were analyzed with these samples. Two of the samples had values of 14 mg/L and 16 mg/L, which is less than three times the detection limit. Therefore no major sources of contamination are indicated by these results.

pH

Five field duplicate samples were analyzed for pH. The repeatability is 0.4% CV.

Eh

Five field duplicate sample pairs were analyzed for Eh. The repeatability was quite good (0.0% CV).

TABLE B.17 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, ICPES					
matrix duplicate					
Aluminum, ICPES	2	10.0 -	108	0.05	0.0
Antimony, ICPES	1	0 -	0	0.00	0.0
Arsenic, ICPES	1	76.0 -	76.0	0.00	0.0
Barium, ICPES	1	78.0 -	78.0	0.00	0.0
Beryllium, ICPES	1	82.0 -	82.0	5.66	6.9
Cadmium, ICPES	2	67.5 -	87.6	3.60	5.3
Chromium, ICPES	2	50.5 -	81.1	9.50	18.8
Copper, ICPES	2	70.5 -	91.5	9.50	13.5
Lead, ICPES	2	68.5 -	114	1.62	2.3
Nickel, ICPES	2	61.0 -	71.5	19.01	31.2
Selenium, ICPES	1	76.0 -	76.0	0.00	0.0
Silver, ICPES	2	82.2 -	85.0	1.19	1.4
Sodium, ICPES	1	77.5 -	77.5	3.54	4.6
Thallium, ICPES	1	81.0 -	81.0	1.41	1.7
Zinc, ICPES	2	66.5 -	76.8	0.71	1.0
Predigestion					
Calcium, ICPES	1	151500 -	151500	2121.64	1.4
PCBs					
Analytical					
PCB-1016	2	ND -	ND	NC	NC
PCB-1221	2	ND -	ND	NC	NC
PCB-1232	2	ND -	ND	NC	NC
PCB-1242	2	6450 -	24000	250.04	3.9
PCB-1248	2	ND -	ND	NC	NC
PCB-1254	2	ND -	ND	NC	NC
PCB-1260	2	5450 -	9150	158.14	2.8
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	2	100 -	104	11.66	11.5
Dibutylchloroendate	2	0 -	0	0.00	0.0
PCB-1254	1	0 -	0	0.00	0.0
PCB-1260	1	95.0 -	95.0	8.49	8.9

NC: Not Calculable

ND: NOt Detected

TABLE B.17 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Volatile Organics, Matrix Spike					
matrix duplicate					
1,1-Dichloroethene	1	74.5 -	74.5	0.71	0.9
1,2-Dichloroethane-d4	1	98.0 -	98.0	0.00	0.0
Benzene	1	75.0 -	75.0	1.41	1.9
Chlorobenzene	1	103 -	103	3.54	3.4
Toluene	1	63.0 -	63.0	15.56	24.7
Toluene-d8	1	88.0 -	88.0	1.41	1.6
Trichloroethene	1	90.0 -	90.0	5.66	6.3
p-Bromofluorobenzene	1	76.0 -	76.0	0.00	0.0
Semivolatile Organics, Matrix Spike					
field duplicate					
1,2,4-Trichlorobenzene	1	102 -	102	12.02	11.8
1,4-Dichlorobenzene	1	80.5 -	80.5	10.61	13.2
2,4-Dinitrotoluene	1	77.5 -	77.5	13.44	17.3
2-Fluorobiphenyl	1	84.0 -	84.0	7.07	8.4
Acenaphthene	1	76.0 -	76.0	9.90	13.0
Di-n-propylnitrosamine	1	87.0 -	87.0	15.56	17.9
Nitrobenzene-d5	1	85.0 -	85.0	11.32	13.3
Phenol	1	7.0 -	7.0	0.00	0.0
Phenol-d5	1	8.5 -	8.5	0.42	5.0
Pyrene	1	62.5 -	62.5	2.12	3.4
Terphenyl-d14	1	83.0 -	83.0	26.87	32.4
p-Chloro-m-cresol	1	8.0 -	8.0	0.00	0.0
9040					
field duplicate					
pH	1	12.1 -	12.1	0.07	0.6
ASA-13-2					
field duplicate					
Bulk Density	18	1.4 -	1.7	0.01	0.8

NC: Not Calculable
ND: NOt Detected

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TABLE B.17 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, Cold Vapor				
matrix duplicate				
Mercury Predigestion	2	69.0 - 78.5	1.38	1.9
Mercury	1	ND - ND	NC	NC
D-1498				
field duplicate				
Eh	1	-54.5 - -54.5	4.95	1.7
D-16-33				
field duplicate				
Unconfined Compressive Strength	18	249 - 965	90.58	19.3
D-2216				
field duplicate				
Water Content	18	9.9 - 22.8	1.61	10.4
D-2234				
field duplicate				
Permeability	1	0.00000 - 0.00000	0.00	9.8
Metals, Graphite Furnace				
matrix duplicate				
Arsenic, graphite AA	2	0 - 113	2.55	7.3
Selenium, graphite AA	2	0 - 59.1	10.30	24.7
Thallium, graphite AA	2	46.0 - 52.0	17.12	33.0
Infrared Methods				
matrix duplicate				

NC: Not Calculable
ND: NOt Detected

TABLE B.17 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Oil and grease, infrared	1	120 - 120	1.41	1.2
Predigestion				
Oil and grease, infrared	4	58500 - 193000	5830.65	9.4
LOI				
Predigestion				
Loss on ignition at 550C	1	402000 - 402000	0.00	0.0

NC: Not Calculable
ND: NOt Detected

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TABLE B 18 MATRIX SPIKE RESULTS FOR POST TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	1	90 0		0	0	80 0 - 120 0
Antimony, ICPES	1	88 0		0	0	80 0 - 120 0
Arsenic, ICPES	1	93 0		0	0	80 0 - 120 0
Barium, ICPES	1	91 0		0	0	80 0 - 120 0
Beryllium, ICPES	1	90 0		0	0	80 0 - 120 0
Cadmium, ICPES	1	80 0		0	0	80 0 - 120 0
Chromium, ICPES	1	93 0		0	0	80 0 - 120 0
Copper, ICPES	1	90 0		0	0	80 0 - 120 0
Lead, ICPES	1	86 0		0	0	80 0 - 120 0
Nickel, ICPES	1	90 0		0	0	80 0 - 120 0
Selenium, ICPES	1	100 0		0	0	80 0 - 120 0
Silver, ICPES	1	93 0		0	0	80 0 - 120 0
Sodium, ICPES	1	92 0		0	0	80 0 - 120 0
Thallium, ICPES	1	90 0		0	0	80 0 - 120 0
Zinc, ICPES	1	96 0		0	0	80 0 - 120 0
matrix spike						
Aluminum, ICPES	4	61 4	53 7	2	0	80 0 - 120 0
Antimony, ICPES	2	0	0	2	0	80 0 - 120 0
Arsenic, ICPES	2	75 8	0 35	2	0	80 0 - 120 0
Barium, ICPES	2	77 8	0 32	2	0	80 0 - 120 0
Beryllium, ICPES	2	81 9	5 5	1	0	80 0 - 120 0
Cadmium, ICPES	4	77 5	12 0	2	0	80 0 - 120 0
Chromium, ICPES	4	65 7	19 4	2	0	80 0 - 120 0
Copper, ICPES	4	81 1	14 3	1	0	80 0 - 120 0
Lead, ICPES	4	91 5	26 4	2	0	80 0 - 120 0

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TABLE B 10 MATRIX SPIKE RESULTS FOR POST TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Nickel, ICPES	4	66.2	16.8	3	0	80.0 - 120.0
Selenium, ICPES	2	75.8	0.35	2	0	80.0 - 120.0
Silver, ICPES	4	79.1	3.7	2	0	80.0 - 120.0
Sodium, ICPES	2	77.5	3.5	1	0	80.0 - 120.0
Thallium, ICPES	2	80.8	1.2	0	0	80.0 - 120.0
Zinc, ICPES	4	71.4	6.2	4	0	80.0 - 120.0
PCBs						
matrix spike						
PCB 1254	1	18.1	31.8	2	0	29.0 - 131.0
PCB 1260	2	95.0	8.5	0	0	8.0 - 127.0
Volatile Organics, Matrix Spike						
matrix spike						
1,1 Dichloroethene	2	74.5	0.71	0	0	0 - 234.0
Benzene	2	75.0	1.4	0	0	17.0 - 151.0
Chlorobenzene	2	102.5	3.5	0	0	37.0 - 160.0
Toluene	2	63.0	15.6	0	0	47.0 - 150.0
Trichloroethene	2	90.0	5.7	0	0	71.0 - 157.0
Semivolatile Organics, Matrix Spike						
matrix spike						
1,2,4-Trichlorobenzene	2	101.5	12.0	-	0	56.0 - 142.0
1,4-Dichlorobenzene	2	80.5	10.6	0	0	20.0 - 124.0
2,4-Dinitrotoluene	2	77.5	13.4	0	0	39.0 - 139.0
2-Chlorophenol	2	5	0.71	2	0	23.0 - 134.0
Acenaphthene	2	76.0	9.9	0	0	47.0 - 145.0
Di-n-propylnitrosamine	2	87.0	15.6	0	0	0 - 230.0

TABLE B 18 MATRIX SPIKE RESULTS FOR POST TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Nitrophenol	2	5	0.71	0	0	0 - 232.0
Pentachlorophenol	2	0	0	2	0	14.0 - 176.0
Phenol	2	7.0	0	0	0	5.0 - 112.0
Pyrene	2	62.5	2.1	0	0	52.0 - 115.0
p-Chloro-m-cresol	2	8.0	0	2	0	22.0 - 147.0
Metals, Cold Vapor						
matrix spike						
Mercury	5	73.8	5.6	4	0	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	1	92.0		0	0	80.0 - 120.0
Selenium, graphite AA	1	100.0		0	0	80.0 - 120.0
Thallium, graphite AA	1	88.0		0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	4	40.5	46.9	3	0	80.0 - 120.0
Selenium, graphite AA	6	42.0	33.5	6	0	80.0 - 120.0
Thallium, graphite AA	6	40.6	5.1	6	0	80.0 - 120.0
Infrared Methods						
matrix spike						
Oil and grease, infrared	2	0	0	2	0	80.0 - 120.0

TABLE B 19 SURROGATE SPIKE RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	22	97.3	15.8	0	0	17.0 - 152.0
Dibutylchlorendate	22	0	0	22	0	20.0 - 150.0
Volatile Organics						
Surrogate spike						
1,2-Dichloroethane-d4	13	91.5	7.1	0	0	76.0 - 114.0
BFB	13	80.5	22.7	8	1	86.0 - 115.0
d8-toluene	13	63.5	21.8	10	0	88.0 - 110.0
Volatile Organics, Matrix Spike						
Surrogate spike						
1,2-Dichloroethane-d4	2	96.0	0	0	0	76.0 - 114.0
Toluene-d8	2	88.0	1.4	1	0	88.0 - 110.0
p-Bromofluorobenzene	2	76.0	0	2	0	86.0 - 115.0
Semivolatile Organics						
Surrogate spike						
2,4,6-Tribromophenol	15	49.7	30.8	2	0	10.0 - 171.0
2-Fluorobiphenyl	15	91.5	5.7	0	0	43.0 - 116.0
2-Fluorophenol	15	50.4	25.4	2	0	21.0 - 100.0
Nitrobenzene-d5	14	83.8	7.0	0	0	35.0 - 114.0
Phenol-d5	15	55.1	25.5	0	1	10.0 - 94.0
Terphenyl-d14	15	86.5	10.7	0	0	33.0 - 141.0

Semivolatile Organics, Matrix Spike

TABLE B 19 SURROGATE SPIKE RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX =

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Surrogate spike						
2,4,6-Tribromophenol	2	0	0	2	0	10.0 - 123.0
2-Fluorobiphenyl	2	84.0	7.1	0	0	43.0 - 116.0
2-Fluorophenol	2	0	0	2	0	21.0 - 100.0
Nitrobenzene-d5	2	85.0	11.3	0	0	35.0 - 114.0
Phenol-d5	2	8.5	0.42	2	0	10.0 - 94.0
Terphenyl-d14	2	83.0	26.9	0	0	33.0 - 141.0

TABLE B.20 BLANK RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Treated				
Metals, ICPES				
preparation				
Aluminum, ICPES	1	0		0.20
Antimony, ICPES	1	0		0.20
Arsenic, ICPES	1	0		0.30
Barium, ICPES	1	0		0.010
Beryllium, ICPES	1	0		0.0020
Cadmium, ICPES	1	0		0.0050
Calcium, ICPES	1	0		1.0
Chromium, ICPES	1	0		0.030
Copper, ICPES	1	0		0.020
Lead, ICPES	1	0		0.050
Nickel, ICPES	1	0		0.020
Selenium, ICPES	1	0		0.30
Silver, ICPES	1	0		0.030
Sodium, ICPES	1	1	1.2 - 1.2	
Thallium, ICPES	1	0		0.10
Zinc, ICPES	1	0		0.020
PCBs				
Reagent				
PCB-1016	2	0		20.0
PCB-1221	2	0		40.0
PCB-1232	2	0		40.0
PCB-1242	2	0		20.0
PCB-1248	2	0		20.0
PCB-1254	2	0		40.0
PCB-1260	2	0		40.0
Volatile Organics				
Reagent				
1,1,1-Trichloroethane	1	0		2.0
1,1,2,2-Tetrachloroethane	1	0		2.0
1,1,2-Trichloroethane	1	0		2.0
1,1-Dichloroethane	1	0		2.0
1,1-Dichloroethene	1	0		2.0
1,2,3-Trichloropropane	1	0		2.0

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TABLE B.20 BLANK RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Volatile Organics					
Reagent					
	1,2-Dichloroethane	1	0		2.0
	1,2-Dichloropropane	1	0		2.0
	2-Butanone	1	0		10.0
	2-Chloroethyl vinyl ether	1	0		2.0
	2-Hexanone	1	0		10.0
	4-Methyl-2-pentanone	1	0		2.0
	Acetone	1	0		25.0
	Acrolein	1	0		100
	Acrylonitrile	1	0		25.0
	Benzene	1	0		2.0
	Bromoform	1	0		2.0
	Bromomethane	1	0		2.0
	Carbon Disulfide	1	0		2.0
	Carbon Tetrachloride	1	0		2.0
	Chlorobenzene	1	0		2.0
	Chlorodibromomethane	1	0		2.0
	Chloroethane	1	0		2.0
	Chloroform	1	0		2.0
	Chloromethane	1	0		2.0
	Dibromomethane	1	0		2.0
	Dichlorobromomethane	1	0		2.0
	Dichlorodifluoromethane	1	0		2.0
	Ethyl benzene	1	0		2.0
	Ethyl methacrylate	1	0		50.0
	Iodomethane	1	0		2.0
	Methylene chloride	1	0		10.0
	Styrene	1	0		2.0
	Tetrachloroethylene	1	0		2.0
	Toluene	1	0		2.0
	Trichloroethene	1	0		2.0
	Trichlorofluoromethane	1	0		10.0
	Vinyl Acetate	1	0		2.0
	Vinyl chloride	1	0		2.0
	Xylenes	1	0		2.0
	cis-1,3-Dichloropropene	1	0		2.0
	trans-1,2-Dichloroethene	1	0		2.0

TABLE B.20 BLANK RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Volatile Organics					
Reagent					
	trans-1,3-Dichloropropene	1	0		2.0
Semivolatile Organics					
Field Blank					
	Acenaphthene	1	1	15.0 - 15.0	
	Chrysene	1	1	5.0 - 5.0	
	Di-n-butylphthalate	1	1	9.5 - 9.5	
	Dibenzofuran	1	1	9.5 - 9.5	
	Fluoranthene	1	1	12.0 - 12.0	
	Fluorene	1	1	15.0 - 15.0	
	Hexachlorobutadiene	1	1	11.0 - 11.0	
	Isophorone	1	1	7.5 - 7.5	
	Pyrene	1	1	8.5 - 8.5	
	bis(2-Ethylhexyl)phthalate	1	1	14.0 - 14.0	
Reagent					
	1,2,4,5-Tetrachlorobenzene	1	0		33.0
	1,2,4-Trichlorobenzene	1	0		3.3
	1,2-Dichlorobenzene	1	0		3.3
	1,2-Diphenylhydrazine	1	0		3.3
	1,3-Dichlorobenzene	1	0		3.3
	1,3-Dinitrobenzene	1	0		33.0
	1,4-Dichlorobenzene	1	0		3.3
	1-Chloronaphthalene	1	0		3.3
	1-Naphthylamine	1	0		33.0
	2,3,4,6-Tetrachlorophenol	1	0		33.0
	2,4,5-Trichlorophenol	1	0		17.0
	2,4,6-Trichlorophenol	1	0		17.0
	2,4-Dichlorophenol	1	0		3.3
	2,4-Dimethylphenol	1	0		3.3
	2,4-Dinitrophenol	1	0		17.0
	2,4-Dinitrotoluene	1	0		3.3
	2,6-Dichlorophenol	1	0		3.3
	2,6-Dinitrotoluene	1	0		3.3
	2-Chloronaphthalene	1	0		3.3
	2-Chlorophenol	1	0		3.3
	2-Methylnaphthalene	1	0		3.3

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TABLE B.20 BLANK RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics					
Reagent					
	2-Naphthylamine	1	0		33.0
	2-Nitroaniline	1	0		17.0
	2-Nitrophenol	1	0		17.0
	2-Picoline	1	0		17.0
	3,3'-Dichlorobenzidene	1	0		6.6
	3-Methylcholanthrene	1	0		6.6
	3-Nitroaniline	1	0		17.0
	4,6-Dinitro-2-Methylphenol	1	0		17.0
	4-Aminobiphenyl	1	0		83.0
	4-Bromophenyl phenyl ether	1	0		3.3
	4-Chloro-3-methylphenol	1	0		3.3
	4-Chlorophenyl phenyl ether	1	0		3.3
	4-Nitroaniline	1	0		17.0
	4-Nitrophenol	1	0		17.0
	5-Nitro-o-toluidine	1	0		17.0
	7,12-Dimethylbenz(a)anthracene	1	0		6.6
	Acenaphthene	1	0		3.3
	Acenaphthylene	1	0		3.3
	Acetophenone	1	0		3.3
	Aniline	1	0		6.6
	Anthracene	1	0		3.3
	Benzidine	1	0		3.3
	Benzo(a)anthracene	1	0		3.3
	Benzo(a)pyrene	1	0		3.3
	Benzo(b)fluoranthene	1	0		3.3
	Benzo(g,h,i)perylene	1	0		3.3
	Benzo(k)fluoranthene	1	0		3.3
	Benzoic acid	1	0		3.3
	Benzyl alcohol	1	0		3.3
	Butyl benzyl phthalate	1	0		3.3
	Chlorobenzilate	1	0		3.3
	Chrysene	1	0		3.3
	Di-n-butylphthalate	1	0		3.3
	Di-n-octylphthalate	1	0		3.3
	Dibenz(a,j)acridine	1	0		3.3
	Dibenzo(a,h)anthracene	1	0		3.3

TABLE B.20 BLANK RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics					
Reagent					
	Dibenzofuran	1	0		3.3
	Diethylphthalate	1	0		3.3
	Dimethylphthalate	1	0		3.3
	Diphenylamine	1	0		3.3
	Ethyl methanesulfonate	1	0		3.3
	Fluoranthene	1	0		3.3
	Fluorene	1	0		3.3
	Hexachlorobenzene	1	0		3.3
	Hexachlorobutadiene	1	0		3.3
	Hexachlorocyclopentadiene	1	0		3.3
	Hexachloroethane	1	0		3.3
	Indeno(1,2,3-c,d)pyrene	1	0		3.3
	Isophorone	1	0		3.3
	Methyl methanesulfonate	1	0		6.6
	N-Nitrosodi-n-butylamine	1	0		17.0
	N-Nitrosodimethylamine	1	0		17.0
	N-Nitrosodiphenylamine	1	0		17.0
	N-Nitrosodipropylamine	1	0		17.0
	N-Nitrosopiperidine	1	0		17.0
	Naphthalene	1	0		3.3
	Nitrobenzene	1	0		3.3
	Pentachlorobenzene	1	0		3.3
	Pentachloronitrobenzene	1	0		33.0
	Pentachlorophenol	1	0		17.0
	Phenacetin	1	0		33.0
	Phenanthrene	1	0		3.3
	Phenol	1	0		3.3
	Pronamide	1	0		33.0
	Pyrene	1	0		3.3
	a,a-Dimethylphenethylamine	1	0		8.3
	bis(2-Chloroethoxy)methane	1	0		3.3
	bis(2-Chloroethyl)ether	1	0		3.3
	bis(2-Chloroisopropyl)ether	1	0		3.3
	bis(2-Ethylhexyl)phthalate	1	0		3.3
	o-Cresol	1	0		3.3
	p-Chloroaniline	1	0		6.6

TABLE B.20 BLANK RESULTS FOR POST-TREATMENT SOLIDS

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics					
Reagent					
	p-Cresol	1	0		3.3
	p-Dimethylaminoazobenzene	1	0		3.3
Metals, Cold Vapor					
preparation					
	Mercury	3	0		0.00020
Metals, Graphite Furnace					
preparation					
	Arsenic, graphite AA	1	0		0.0020
	Selenium, graphite AA	1	0		0.0050
	Thallium, graphite AA	1	0		0.0020

TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, ICPES					
field duplicate					
Aluminum, ICPES	1	0.35 -	0.35	0.05	14.3
Antimony, ICPES	1	ND -	ND	NC	NC
Barium, ICPES	1	2.3 -	2.3	0.21	9.4
Beryllium, ICPES	1	ND -	ND	NC	NC
Cadmium, ICPES	1	ND -	ND	NC	NC
Chromium, ICPES	1	0.037 -	0.037	0.00	0.0
Copper, ICPES	1	0.047 -	0.047	0.03	63.2
Lead, ICPES	1	ND -	ND	NC	NC
Nickel, ICPES	1	ND -	ND	NC	NC
Silver, ICPES	1	ND -	ND	NC	NC
Sodium, ICPES	1	16.5 -	16.5	0.71	4.3
Zinc, ICPES	1	ND -	ND	NC	NC
matrix duplicate					
Aluminum, ICPES	4	85.5 -	92.3	1.81	2.1
Antimony, ICPES	4	74.1 -	88.5	1.49	1.9
Barium, ICPES	4	85.0 -	91.4	5.49	6.3
Beryllium, ICPES	4	83.4 -	89.5	1.01	1.2
Cadmium, ICPES	4	78.5 -	89.5	1.27	1.6
Chromium, ICPES	4	81.5 -	86.4	1.21	1.5
Copper, ICPES	4	88.0 -	90.6	1.54	1.7
Lead, ICPES	4	66.1 -	78.5	2.04	2.9
Nickel, ICPES	4	79.5 -	85.2	1.67	2.1
Silver, ICPES	4	80.5 -	90.9	1.71	2.0
Sodium, ICPES	4	95.0 -	106	5.48	5.5
Zinc, ICPES	4	78.5 -	87.1	1.23	1.5
PCBs					
Analytical					
PCB-1016	2	ND -	ND	NC	NC
PCB-1221	2	ND -	ND	NC	NC
PCB-1232	2	ND -	ND	NC	NC
PCB-1242	2	ND -	ND	NC	NC
PCB-1248	2	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
PCB-1254	2	ND -	ND	NC	NC
PCB-1260	2	ND -	ND	NC	NC
field duplicate					
PCB-1016	1	ND -	ND	NC	NC
PCB-1221	1	ND -	ND	NC	NC
PCB-1232	1	ND -	ND	NC	NC
PCB-1242	1	ND -	ND	NC	NC
PCB-1248	1	ND -	ND	NC	NC
PCB-1254	1	ND -	ND	NC	NC
PCB-1260	1	ND -	ND	NC	NC
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	1	98.0 -	98.0	1.41	1.4
Dibutylchloroendate	1	98.5 -	98.5	0.71	0.7
PCB-1254	1	118 -	118	6.36	5.4
Volatile Organics					
field duplicate					
1,1,1-Trichloroethane	1	ND -	ND	NC	NC
1,1,2,2-Tetrachloroethane	1	ND -	ND	NC	NC
1,1,2-Trichloroethane	1	ND -	ND	NC	NC
1,1-Dichloroethane	1	ND -	ND	NC	NC
1,1-Dichloroethene	1	ND -	ND	NC	NC
1,2,3-Trichloropropane	1	ND -	ND	NC	NC
1,2-Dichloroethane	1	ND -	ND	NC	NC
1,2-Dichloropropane	1	ND -	ND	NC	NC
2-Chloroethyl vinyl ether	1	ND -	ND	NC	NC
2-Hexanone	1	ND -	ND	NC	NC
4-Methyl-2-pentanone	1	21.5 -	21.5	9.19	42.8
Acetone	1	125 -	125	50.21	40.3
Acrolein	1	ND -	ND	NC	NC
Acrylonitrile	1	ND -	ND	NC	NC
Benzene	1	ND -	ND	NC	NC
Bromoform	1	ND -	ND	NC	NC
Bromomethane	1	ND -	ND	NC	NC
Carbon Disulfide	1	ND -	ND	NC	NC
Carbon Tetrachloride	1	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

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TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Chlorobenzene	1	ND -	ND	NC	NC
Chlorodibromomethane	1	ND -	ND	NC	NC
Chloroethane	1	ND -	ND	NC	NC
Chloroform	1	ND -	ND	NC	NC
Chloromethane	1	ND -	ND	NC	NC
Dibromomethane	1	ND -	ND	NC	NC
Dichlorobromomethane	1	ND -	ND	NC	NC
Dichlorodifluoromethane	1	ND -	ND	NC	NC
Ethyl benzene	1	3.1 -	3.1	0.64	20.9
Ethyl methacrylate	1	ND -	ND	NC	NC
Iodomethane	1	ND -	ND	NC	NC
Methylene chloride	1	ND -	ND	NC	NC
Styrene	1	ND -	ND	NC	NC
Tetrachloroethylene	1	ND -	ND	NC	NC
Toluene	1	36.5 -	36.5	9.19	25.2
Trichloroethene	1	ND -	ND	NC	NC
Trichlorofluoromethane	1	ND -	ND	NC	NC
Vinyl Acetate	1	ND -	ND	NC	NC
Vinyl chloride	1	ND -	ND	NC	NC
Xylenes	1	8.1 -	8.1	1.63	20.2
cis-1,3-Dichloropropene	1	ND -	ND	NC	NC
trans-1,2-Dichloroethene	1	ND -	ND	NC	NC
trans-1,3-Dichloropropene	1	ND -	ND	NC	NC
Volatile Organics, Matrix Spike					
matrix duplicate					
1,1-Dichloroethene	2	53.0 -	54.5	1.80	3.3
1,2-Dichloroethane-d4	2	94.5 -	95.0	1.12	1.2
Benzene	2	69.0 -	76.0	2.00	2.6
Chlorobenzene	2	101 -	107	4.72	4.5
Toluene	2	68.5 -	91.0	4.61	6.7
Toluene-d8	2	98.5 -	99.0	1.12	1.1
Trichloroethene	2	93.5 -	101	6.04	6.1
p-Bromofluorobenzene	2	92.5 -	92.5	1.58	1.7
Semivolatile Organics					
field duplicate					

NC: Not Calculable
ND: NOt Detected

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TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
1,2,4,5-Tetrachlorobenzene	1	ND -	ND	NC	NC
1,2,4-Trichlorobenzene	1	ND -	ND	NC	NC
1,2-Dichlorobenzene	1	ND -	ND	NC	NC
1,2-Diphenylhydrazine	1	ND -	ND	NC	NC
1,3-Dichlorobenzene	1	ND -	ND	NC	NC
1,3-Dinitrobenzene	1	ND -	ND	NC	NC
1,4-Dichlorobenzene	1	ND -	ND	NC	NC
1-Chloronaphthalene	1	ND -	ND	NC	NC
1-Naphthylamine	1	ND -	ND	NC	NC
2,3,4,6-Tetrachlorophenol	1	ND -	ND	NC	NC
2,4,5-Trichlorophenol	1	ND -	ND	NC	NC
2,4,6-Trichlorophenol	1	ND -	ND	NC	NC
2,4-Dichlorophenol	1	ND -	ND	NC	NC
2,4-Dimethylphenol	1	9.0 -	9.0	5.66	62.9
2,4-Dinitrophenol	1	ND -	ND	NC	NC
2,4-Dinitrotoluene	1	ND -	ND	NC	NC
2,6-Dichlorophenol	1	ND -	ND	NC	NC
2,6-Dinitrotoluene	1	ND -	ND	NC	NC
2-Chloronaphthalene	1	ND -	ND	NC	NC
2-Chlorophenol	1	ND -	ND	NC	NC
2-Methylnaphthalene	1	ND -	ND	NC	NC
2-Naphthylamine	1	ND -	ND	NC	NC
2-Nitroaniline	1	ND -	ND	NC	NC
2-Nitrophenol	1	ND -	ND	NC	NC
2-Picoline	1	ND -	ND	NC	NC
3,3'-Dichlorobenzidene	1	ND -	ND	NC	NC
3-Methylcholanthrene	1	ND -	ND	NC	NC
3-Nitroaniline	1	ND -	ND	NC	NC
4-Aminobiphenyl	1	ND -	ND	NC	NC
4-Bromophenyl phenyl ether	1	ND -	ND	NC	NC
4-Chloro-3-methylphenol	1	ND -	ND	NC	NC
4-Nitroaniline	1	ND -	ND	NC	NC
4-Nitrophenol	1	ND -	ND	NC	NC
5-Nitro-o-toluidine	1	ND -	ND	NC	NC
Acenaphthene	1	ND -	ND	NC	NC
Acenaphthylene	1	ND -	ND	NC	NC
Acetophenone	1	ND -	ND	NC	NC
Aniline	1	ND -	ND	NC	NC
Anthracene	1	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

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TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Benzidine	1	ND -	ND	NC	NC
Benzo(a)anthracene	1	ND -	ND	NC	NC
Benzo(a)pyrene	1	ND -	ND	NC	NC
Benzo(b)fluoranthene	1	ND -	ND	NC	NC
Benzo(k)fluoranthene	1	ND -	ND	NC	NC
Benzoic acid	1	ND -	ND	NC	NC
Benzyl alcohol	1	96.0 -	96.0	19.80	20.6
Butyl benzyl phthalate	1	ND -	ND	NC	NC
Chlorobenzilate	1	ND -	ND	NC	NC
Chrysene	1	ND -	ND	NC	NC
Di-n-butylphthalate	1	ND -	ND	NC	NC
Di-n-octylphthalate	1	ND -	ND	NC	NC
Dibenz(a,j)acridine	1	ND -	ND	NC	NC
Dibenzo(a,h)anthracene	1	ND -	ND	NC	NC
Dibenzofuran	1	ND -	ND	NC	NC
Diethylphthalate	1	ND -	ND	NC	NC
Dimethylphthalate	1	ND -	ND	NC	NC
Diphenylamine	1	ND -	ND	NC	NC
Ethyl methanesulfonate	1	ND -	ND	NC	NC
Fluoranthene	1	ND -	ND	NC	NC
Fluorene	1	ND -	ND	NC	NC
Hexachlorobenzene	1	ND -	ND	NC	NC
Hexachlorobutadiene	1	ND -	ND	NC	NC
Hexachlorocyclopentadiene	1	ND -	ND	NC	NC
Hexachloroethane	1	ND -	ND	NC	NC
Isophorone	1	ND -	ND	NC	NC
Methyl methanesulfonate	1	ND -	ND	NC	NC
N-Nitrosodi-n-butylamine	1	ND -	ND	NC	NC
N-Nitrosodimethylamine	1	ND -	ND	NC	NC
N-Nitrosodiphenylamine	1	ND -	ND	NC	NC
N-Nitrosodipropylamine	1	ND -	ND	NC	NC
N-Nitrosopiperidine	1	ND -	ND	NC	NC
Naphthalene	1	ND -	ND	NC	NC
Nitrobenzene	1	ND -	ND	NC	NC
Pentachlorobenzene	1	ND -	ND	NC	NC
Pentachloronitrobenzene	1	ND -	ND	NC	NC
Pentachlorophenol	1	ND -	ND	NC	NC
Phenacetin	1	ND -	ND	NC	NC
Phenanthrene	1	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Phenol	1	96.0 - 96.0	5.66	5.9
Pronamide	1	ND - ND	NC	NC
Pyrene	1	ND - ND	NC	NC
a,a-Dimethylphenethylamine	1	ND - ND	NC	NC
bis(2-Chloroethoxy)methane	1	ND - ND	NC	NC
bis(2-Chloroethyl)ether	1	ND - ND	NC	NC
bis(2-Ethylhexyl)phthalate	1	ND - ND	NC	NC
o-Cresol	1	11.5 - 11.5	0.71	6.1
p-Chloroaniline	1	ND - ND	NC	NC
p-Cresol	1	90.5 - 90.5	2.12	2.3
p-Dimethylaminoazobenzene	1	ND - ND	NC	NC
Semivolatile Organics, Matrix Spike				
matrix duplicate				
1,2,4-Trichlorobenzene	2	105 - 107	3.16	3.0
1,4-Dichlorobenzene	2	75.0 - 92.0	5.10	5.6
2,4,6-Tribromophenol	2	10.5 - 112	2.12	14.4
2,4-Dinitrotoluene	2	87.0 - 102	3.00	2.9
2-Chlorophenol	2	23.5 - 103	1.12	2.3
2-Fluorobiphenyl	2	82.0 - 82.5	3.35	4.1
2-Fluorophenol	2	8.5 - 158	3.81	17.8
Acenaphthene	2	73.0 - 77.0	1.00	1.3
Di-n-propylnitrosamine	2	81.5 - 105	5.85	7.0
Nitrobenzene-d5	2	91.5 - 107	2.69	2.9
Nitrophenol	2	2.8 - 79.0	8.00	12.4
Pentachlorophenol	2	2.0 - 101	2.50	100.0
Phenol	2	74.0 - 115	7.81	9.2
Phenol-d5	2	28.0 - 82.5	4.61	6.5
Pyrene	2	63.5 - 75.5	1.58	2.5
Terphenyl-d14	2	72.5 - 77.5	3.54	4.9
p-Chloro-m-cresol	2	91.5 - 146	4.27	3.2
9040				
field duplicate				
pH	1	11.5 - 11.5	0.01	0.1

NC: Not Calculable
ND: NOt Detected

TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, Cold Vapor					
field duplicate					
Mercury	1	ND -	ND	NC	NC
matrix duplicate					
Mercury	2	88.5 -	100	3.50	4.0
Predigestion					
Mercury	1	0.17 -	0.17	0.01	4.3
D-1498					
field duplicate					
Eh	1	-58.0 -	-58.0	1.41	4.3
Metals, Graphite Furnace					
field duplicate					
Arsenic, graphite AA	1	0.017 -	0.017	0.00	4.3
Selenium, graphite AA	1	ND -	ND	NC	NC
Thallium, graphite AA	1	ND -	ND	NC	NC
matrix duplicate					
Arsenic, graphite AA	6	31.0 -	82.0	18.40	58.0
Lead, graphite AA	3	84.0 -	101	10.39	11.2
Selenium, graphite AA	6	0 -	67.0	4.87	59.2
Thallium, graphite AA	8	26.0 -	53.0	2.88	7.4
Infrared Methods					
field duplicate					
Oil and grease, infrared	1	12.0 -	12.0	0.00	0.0
Predigestion					
Oil and grease, infrared	1	11.5 -	11.5	0.71	6.1

NC: Not Calculable
ND: NOt Detected

TABLE B.21 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Filterable Residue (TDS) field duplicate				
Filterable Residue (TDS) Predigestion	1	9185 - 9185	49.50	0.5
Filterable Residue (TDS)	1	8520 - 8520	141.44	1.7

NC: Not Calculable
ND: NOt Detected

TABLE B 22 MATRIX SPIKE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	2	90.2	1.7	0	0	80.0 - 120.0
Antimony, ICPES	2	90.0	2.8	0	0	80.0 - 120.0
Barium, ICPES	2	92.2	0.28	0	0	80.0 - 120.0
Beryllium, ICPES	2	93.2	1.6	0	0	80.0 - 120.0
Cadmium, ICPES	3	90.9	0.85	0	0	80.0 - 120.0
Chromium, ICPES	1	92.8		0	0	80.0 - 120.0
Copper, ICPES	2	92.8	1.8	0	0	80.0 - 120.0
Lead, ICPES	2	91.5	0.78	0	0	80.0 - 120.0
Nickel, ICPES	2	93.1	1.5	0	0	80.0 - 120.0
Silver, ICPES	4	88.8	2.4	0	0	80.0 - 120.0
Sodium, ICPES	2	89.7	3.7	0	0	80.0 - 120.0
Zinc, ICPES	2	92.4	0.92	0	0	80.0 - 120.0
matrix spike						
Aluminum, ICPES	8	89.2	3.0	0	0	80.0 - 120.0
Antimony, ICPES	8	80.6	5.6	5	0	80.0 - 120.0
Barium, ICPES	8	88.7	4.9	0	0	80.0 - 120.0
Beryllium, ICPES	8	86.3	2.5	0	0	80.0 - 120.0
Cadmium, ICPES	8	83.7	4.8	1	0	80.0 - 120.0
Chromium, ICPES	8	83.3	2.2	0	0	80.0 - 120.0
Copper, ICPES	8	88.8	1.6	0	0	80.0 - 120.0
Lead, ICPES	8	72.3	6.3	8	0	80.0 - 120.0
Nickel, ICPES	8	82.2	2.5	1	0	80.0 - 120.0
Silver, ICPES	8	86.3	4.2	1	0	80.0 - 120.0
Sodium, ICPES	8	101.0	6.5	0	0	80.0 - 120.0
Zinc, ICPES	8	82.5	3.6	1	0	80.0 - 120.0

TABLE B 22 MATRIX SPIKE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
matrix spike						
PCB-1254	2	117.5	6.4	0	0	29.0 - 131.0
Volatile Organics, Matrix Spike						
matrix spike						
1,1-Dichloroethene	4	53.8	1.7	0	0	.0 - 234.0
Benzene	4	72.5	4.4	0	0	37.0 - 151.0
Chlorobenzene	4	103.8	5.4	0	0	37.0 - 160.0
Toluene	4	79.8	13.5	0	0	47.0 - 150.0
Trichloroethene	4	97.0	6.4	0	0	71.0 - 157.0
Semivolatile Organics, Matrix Spike						
matrix spike						
1,2,4-Trichlorobenzene	4	106.0	2.8	0	0	44.0 - 142.0
1,4-Dichlorobenzene	4	83.5	10.7	0	0	20.0 - 124.0
2,4-Dinitrotoluene	4	94.5	9.0	0	0	39.0 - 139.0
2-Chlorophenol	4	63.3	45.9	0	0	23.0 - 134.0
Acenaphthene	4	75.0	2.4	0	0	47.0 - 145.0
Di-n-propylnitrosamine	4	93.3	14.4	0	0	0 - 230.0
Nitrophenol	4	40.9	44.5	0	0	0 - 132.0
Pentachlorophenol	4	51.3	56.9	2	0	14.0 - 176.0
Phenol	4	94.5	24.5	0	1	5.0 - 112.0
Pyrene	4	69.5	7.0	0	0	52.0 - 115.0
p-Chloro-m-cresol	4	118.8	31.7	0	1	22.0 - 147.0
Metals, Cold Vapor						

TABLE B 22 MATRIX SPIKE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
matrix spike						
Mercury	4	94.4	7.2	0	0	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	4	86.0	4.3	0	0	80.0 - 120.0
Lead, graphite AA	5	96.8	11.0	0	0	80.0 - 120.0
Selenium, graphite AA	2	107.0	18.4	0	0	80.0 - 120.0
Thallium, graphite AA	2	92.0	5.7	0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	8	64.8	26.9	6	0	80.0 - 120.0
Lead, graphite AA	4	92.5	13.1	1	0	80.0 - 120.0
Selenium, graphite AA	8	6.8	5.8	8	0	80.0 - 120.0
Thallium, graphite AA	8	35.5	11.4	8	0	80.0 - 120.0

TABLE B 23 SURROGATE SPIKE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	17	103.2	28.3	0	0	17.0 - 152.0
Dibutylchlorendate	16	94.7	6.0	0	0	20.0 - 150.0
Volatile Organics						
Surrogate spike						
1,2-Dichloroethane-d4	13	101.0	2.9	0	0	76.0 - 114.0
BFB	13	90.7	2.1	0	0	86.0 - 115.0
d8-toluene	13	97.6	2.8	0	0	88.0 - 110.0
Volatile Organics, Matrix Spike						
Surrogate spike						
1,2-Dichloroethane-d4	4	94.8	0.96	0	0	76.0 - 114.0
Toluene-d8	4	98.8	0.96	0	0	88.0 - 110.0
p-Bromofluorobenzene	4	92.5	1.3	0	0	86.0 - 115.0
Semivolatile Organics						
Surrogate spike						
2,4,6-Tribromophenol	14	75.9	47.4	0	0	10.0 - 123.0
2-Fluorobiphenyl	14	81.1	3.5	0	0	43.0 - 116.0
2-Fluorophenol	14	86.8	64.9	5	8	21.0 - 100.0
Nitrobenzene-d5	14	84.2	8.5	0	0	35.0 - 114.0
Phenol-d5	14	60.7	28.4	1	0	10.0 - 94.0
Terphenyl-d14	14	84.6	12.2	0	0	33.0 - 141.0
Semivolatile Organics, Matrix Spike						

TABLE B 23 SURROGATE SPIKE RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = TCLP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Surrogate spike						
2,4,6-Tribromophenol	4	61.0	58.3	1	0	10.0 - 123.0
2-Fluorobiphenyl	4	82.3	2.8	0	0	43.0 - 116.0
2-Fluorophenol	4	83.0	86.1	2	2	21.0 - 100.0
Nitrobenzene-d5	4	99.3	9.2	0	0	35.0 - 114.0
Phenol-d5	4	55.3	31.7	0	0	10.0 - 94.0
Terphenyl-d14	4	75.0	4.1	0	0	33.0 - 141.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Treated TCLP					
Metals, ICPES					
TCLP blank					
	Aluminum, ICPES	1	0		0.20
	Antimony, ICPES	1	0		0.20
	Barium, ICPES	1	0		0.010
	Beryllium, ICPES	1	0		0.0020
	Cadmium, ICPES	1	0		0.0050
	Calcium, ICPES	1	1	2.0 - 2.0	
	Chromium, ICPES	2	0		0.030
	Copper, ICPES	1	0		0.020
	Lead, ICPES	1	0		0.050
	Nickel, ICPES	1	0		0.020
	Silver, ICPES	1	0		0.030
	Sodium, ICPES	1	0		1.0
	Zinc, ICPES	1	0		0.020
preparation					
	Aluminum, ICPES	4	0		0.20
	Antimony, ICPES	4	0		0.20
	Barium, ICPES	4	0		0.010
	Beryllium, ICPES	4	0		0.0020
	Cadmium, ICPES	5	0		0.0050
	Calcium, ICPES	5	5	1.1 - 1.5	
	Chromium, ICPES	5	0		0.030
	Copper, ICPES	5	1	0.025 - 0.025	0.020
	Lead, ICPES	4	0		0.050
	Nickel, ICPES	5	0		0.020
	Silver, ICPES	5	1	0.033 - 0.033	0.030
	Sodium, ICPES	4	4	1.5 - 2.1	
	Zinc, ICPES	5	0		0.020
PCBs					
TCLP blank					
	PCB-1016	1	0		0.10
	PCB-1221	1	0		0.20
	PCB-1232	1	0		0.20
	PCB-1242	1	0		0.10
	PCB-1248	1	0		0.10

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
PCBs				
TCLP blank				
PCB-1254	1	0		0.20
PCB-1260	1	0		0.20
Reagent				
PCB-1016	2	0		0.020
PCB-1221	2	0		0.040
PCB-1232	2	0		0.040
PCB-1242	2	0		0.020
PCB-1248	2	0		0.020
PCB-1254	2	0		0.040
PCB-1260	2	0		0.040
Volatile Organics				
TCLP blank				
1,1,1-Trichloroethane	1	0		2.0
1,1,2,2-Tetrachloroethane	1	0		2.0
1,1,2-Trichloroethane	1	0		2.0
1,1-Dichloroethane	1	0		2.0
1,1-Dichloroethene	1	0		2.0
1,2,3-Trichloropropane	1	0		2.0
1,2-Dichloroethane	1	0		2.0
1,2-Dichloropropane	1	0		2.0
2-Butanone	1	0		10.0
2-Chloroethyl vinyl ether	1	0		2.0
2-Hexanone	1	0		10.0
4-Methyl-2-pentanone	1	1	4.8 - 4.8	
Acetone	1	1	33.0 - 33.0	
Acrolein	1	0		100
Acrylonitrile	1	0		25.0
Benzene	1	0		2.0
Bromoform	1	0		2.0
Bromomethane	1	0		2.0
Carbon Disulfide	1	0		2.0
Carbon Tetrachloride	1	0		2.0
Chlorobenzene	1	0		2.0
Chlorodibromomethane	1	0		2.0
Chloroethane	1	0		2.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Volatile Organics						
TCLP blank						
	Chloroform	1	0			2.0
	Chloromethane	1	0			2.0
	Dibromomethane	1	0			2.0
	Dichlorobromomethane	1	0			2.0
	Dichlorodifluoromethane	1	0			2.0
	Ethyl benzene	1	0			2.0
	Ethyl methacrylate	1	0			50.0
	Iodomethane	1	0			2.0
	Methylene chloride	1	0			10.0
	Styrene	1	0			2.0
	Tetrachloroethylene	1	1	2.3	2.3	
	Toluene	1	0			2.0
	Trichloroethene	1	0			2.0
	Trichlorofluoromethane	1	0			10.0
	Vinyl Acetate	1	0			2.0
	Vinyl chloride	1	0			2.0
	Xylenes	1	0			2.0
	cis-1,3-Dichloropropene	1	0			2.0
	trans-1,2-Dichloroethene	1	0			2.0
	trans-1,3-Dichloropropene	1	0			2.0
System blank						
	1,1,1-Trichloroethane	2	0			2.0
	1,1,2,2-Tetrachloroethane	2	0			2.0
	1,1,2-Trichloroethane	2	0			2.0
	1,1-Dichloroethane	2	0			2.0
	1,1-Dichloroethene	2	0			2.0
	1,2,3-Trichloropropane	2	0			2.0
	1,2-Dichloroethane	2	0			2.0
	1,2-Dichloropropane	2	0			2.0
	2-Butanone	2	0			10.0
	2-Chloroethyl vinyl ether	2	0			2.0
	2-Hexanone	2	0			10.0
	4-Methyl-2-pentanone	2	0			2.0
	Acetone	2	0			25.0
	Acrolein	2	0			100
	Acrylonitrile	2	0			25.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Volatile Organics					
System blank					
	Benzene	2	0		2.0
	Bromoform	2	0		2.0
	Bromomethane	2	0		2.0
	Carbon Disulfide	2	0		2.0
	Carbon Tetrachloride	2	0		2.0
	Chlorobenzene	2	0		2.0
	Chlorodibromomethane	2	0		2.0
	Chloroethane	2	0		2.0
	Chloroform	2	1	2.2 - 2.2	2.0
	Chloromethane	2	0		2.0
	Dibromomethane	2	0		2.0
	Dichlorobromomethane	2	0		2.0
	Dichlorodifluoromethane	2	0		2.0
	Ethyl benzene	2	0		2.0
	Ethyl methacrylate	2	0		50.0
	Iodomethane	2	0		2.0
	Methylene chloride	2	0		10.0
	Styrene	2	0		2.0
	Tetrachloroethylene	2	0		2.0
	Toluene	2	0		2.0
	Trichloroethene	2	0		2.0
	Trichlorofluoromethane	2	0		10.0
	Vinyl Acetate	2	0		2.0
	Vinyl chloride	2	0		2.0
	Xylenes	2	0		2.0
	cis-1,3-Dichloropropene	2	0		2.0
	trans-1,2-Dichloroethene	2	0		2.0
	trans-1,3-Dichloropropene	2	0		2.0
Semivolatile Organics					
TCLP blank					
	1,2,4,5-Tetrachlorobenzene	1	0		100
	1,2,4-Trichlorobenzene	1	0		10.0
	1,2-Dichlorobenzene	1	0		10.0
	1,2-Diphenylhydrazine	1	0		10.0
	1,3-Dichlorobenzene	1	0		10.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics					
TCLP blank					
	1,3-Dinitrobenzene	1	0		100
	1,4-Dichlorobenzene	1	0		10.0
	1-Chloronaphthalene	1	0		10.0
	1-Naphthylamine	1	0		100
	2,3,4,6-Tetrachlorophenol	1	0		100
	2,4,5-Trichlorophenol	1	0		50.0
	2,4,6-Trichlorophenol	1	0		50.0
	2,4-Dichlorophenol	1	0		10.0
	2,4-Dimethylphenol	1	0		10.0
	2,4-Dinitrophenol	1	0		50.0
	2,4-Dinitrotoluene	1	0		10.0
	2,6-Dichlorophenol	1	0		10.0
	2,6-Dinitrotoluene	1	0		10.0
	2-Chloronaphthalene	1	0		10.0
	2-Chlorophenol	1	0		10.0
	2-Methylnaphthalene	1	0		10.0
	2-Naphthylamine	1	0		100
	2-Nitroaniline	1	0		50.0
	2-Nitrophenol	1	0		50.0
	2-Picoline	1	0		50.0
	3,3'-Dichlorobenzidene	1	0		20.0
	3-Methylcholanthrene	1	0		20.0
	3-Nitroaniline	1	0		50.0
	4,6-Dinitro-2-Methylphenol	1	0		50.0
	4-Aminobiphenyl	1	0		250
	4-Bromophenyl phenyl ether	1	0		10.0
	4-Chloro-3-methylphenol	1	0		10.0
	4-Chlorophenyl phenyl ether	1	0		10.0
	4-Nitroaniline	1	0		50.0
	4-Nitrophenol	1	0		50.0
	5-Nitro-o-toluidine	1	0		50.0
	7,12-Dimethylbenz(a)anthracene	1	0		20.0
	Acenaphthene	1	0		10.0
	Acenaphthylene	1	0		10.0
	Acetophenone	1	0		10.0
	Aniline	1	0		20.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics					
TCLP blank					
	Anthracene	1	0		10.0
	Benzidine	1	0		10.0
	Benzo(a)anthracene	1	0		10.0
	Benzo(a)pyrene	1	0		10.0
	Benzo(b)fluoranthene	1	0		10.0
	Benzo(g,h,i)perylene	1	0		10.0
	Benzo(k)fluoranthene	1	0		10.0
	Benzoic acid	1	0		10.0
	Benzyl alcohol	1	0		10.0
	Butyl benzyl phthalate	1	0		10.0
	Chlorobenzilate	1	0		10.0
	Chrysene	1	0		10.0
	Di-n-butylphthalate	1	0		10.0
	Di-n-octylphthalate	1	0		10.0
	Dibenz(a,j)acridine	1	0		10.0
	Dibenzo(a,h)anthracene	1	0		10.0
	Dibenzofuran	1	0		10.0
	Diethylphthalate	1	0		10.0
	Dimethylphthalate	1	0		10.0
	Diphenylamine	1	0		10.0
	Ethyl methanesulfonate	1	0		10.0
	Fluoranthene	1	0		10.0
	Fluorene	1	0		10.0
	Hexachlorobenzene	1	0		10.0
	Hexachlorobutadiene	1	0		10.0
	Hexachlorocyclopentadiene	1	0		10.0
	Hexachloroethane	1	0		10.0
	Indeno(1,2,3-c,d)pyrene	1	0		10.0
	Isophorone	1	0		10.0
	Methyl methanesulfonate	1	0		20.0
	N-Nitrosodi-n-butylamine	1	0		50.0
	N-Nitrosodimethylamine	1	0		50.0
	N-Nitrosodiphenylamine	1	0		50.0
	N-Nitrosodipropylamine	1	0		50.0
	N-Nitrosopiperidine	1	0		50.0
	Naphthalene	1	0		10.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Semivolatile Organics						
TCLP blank						
	Nitrobenzene	1	0			10.0
	Pentachlorobenzene	1	0			10.0
	Pentachloronitrobenzene	1	0			100
	Pentachlorophenol	1	0			50.0
	Phenacetin	1	0			100
	Phenanthrene	1	0			10.0
	Phenol	1	0			10.0
	Pronamide	1	0			100
	Pyrene	1	0			10.0
	a,a-Dimethylphenethylamine	1	0			25.0
	bis(2-Chloroethoxy)methane	1	0			10.0
	bis(2-Chloroethyl)ether	1	0			10.0
	bis(2-Chloroisopropyl)ether	1	0			10.0
	bis(2-Ethylhexyl)phthalate	1	0			10.0
	o-Cresol	1	0			10.0
	p-Chloroaniline	1	0			20.0
	p-Cresol	1	0			10.0
	p-Dimethylaminoazobenzene	1	0			10.0
Reagent						
	1,2,4,5-Tetrachlorobenzene	2	0			100
	1,2,4-Trichlorobenzene	2	0			10.0
	1,2-Dichlorobenzene	2	0			10.0
	1,2-Diphenylhydrazine	2	0			10.0
	1,3-Dichlorobenzene	2	0			10.0
	1,3-Dinitrobenzene	2	0			100
	1,4-Dichlorobenzene	2	0			10.0
	1-Chloronaphthalene	2	0			10.0
	1-Naphthylamine	2	0			100
	2,3,4,6-Tetrachlorophenol	2	0			100
	2,4,5-Trichlorophenol	2	0			50.0
	2,4,6-Trichlorophenol	2	0			50.0
	2,4-Dichlorophenol	2	0			10.0
	2,4-Dimethylphenol	2	0			10.0
	2,4-Dinitrophenol	2	0			50.0
	2,4-Dinitrotoluene	2	0			10.0
	2,6-Dichlorophenol	2	0			10.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Maximum	Maximum Detection Limit
Semivolatile Organics						
Reagent						
	2,6-Dinitrotoluene	2	0			10.0
	2-Chloronaphthalene	2	0			10.0
	2-Chlorophenol	2	0			10.0
	2-Methylnaphthalene	2	0			10.0
	2-Naphthylamine	2	0			100
	2-Nitroaniline	2	0			50.0
	2-Nitrophenol	2	0			50.0
	2-Picoline	2	0			50.0
	3,3'-Dichlorobenzidene	2	0			20.0
	3-Methylcholanthrene	2	0			20.0
	3-Nitroaniline	2	0			50.0
	4,6-Dinitro-2-Methylphenol	2	0			50.0
	4-Aminobiphenyl	2	0			250
	4-Bromophenyl phenyl ether	2	0			10.0
	4-Chloro-3-methylphenol	2	0			10.0
	4-Chlorophenyl phenyl ether	2	0			10.0
	4-Nitroaniline	2	0			50.0
	4-Nitrophenol	2	0			50.0
	5-Nitro-o-toluidine	2	0			50.0
	7,12-Dimethylbenz(a)anthracene	2	0			20.0
	Acenaphthene	2	0			10.0
	Acenaphthylene	2	0			10.0
	Acetophenone	2	0			10.0
	Aniline	2	0			20.0
	Anthracene	2	0			10.0
	Benzidine	2	0			10.0
	Benzo(a)anthracene	2	0			10.0
	Benzo(a)pyrene	2	0			10.0
	Benzo(b)fluoranthene	2	0			10.0
	Benzo(g,h,i)perylene	2	0			10.0
	Benzo(k)fluoranthene	2	0			10.0
	Benzoic acid	2	0			10.0
	Benzyl alcohol	2	0			10.0
	Butyl benzyl phthalate	2	0			10.0
	Chlorobenzilate	2	0			10.0
	Chrysene	2	0			10.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum	Concentration Range Maximum	Maximum Detection Limit
Semivolatile Organics						
Reagent						
	Di-n-butylphthalate	2	0			10.0
	Di-n-octylphthalate	2	0			10.0
	Dibenz(a,j)acridine	2	0			10.0
	Dibenzo(a,h)anthracene	2	0			10.0
	Dibenzofuran	2	0			10.0
	Diethylphthalate	2	0			10.0
	Dimethylphthalate	2	0			10.0
	Diphenylamine	2	0			10.0
	Ethyl methanesulfonate	2	0			10.0
	Fluoranthene	2	0			10.0
	Fluorene	2	0			10.0
	Hexachlorobenzene	2	0			10.0
	Hexachlorobutadiene	2	0			10.0
	Hexachlorocyclopentadiene	2	0			10.0
	Hexachloroethane	2	0			10.0
	Indeno(1,2,3-c,d)pyrene	2	0			10.0
	Isophorone	2	0			10.0
	Methyl methanesulfonate	2	0			20.0
	N-Nitrosodi-n-butylamine	2	0			50.0
	N-Nitrosodimethylamine	2	0			50.0
	N-Nitrosodiphenylamine	2	0			50.0
	N-Nitrosodipropylamine	2	0			50.0
	N-Nitrosopiperidine	2	0			50.0
	Naphthalene	2	0			10.0
	Nitrobenzene	2	0			10.0
	Pentachlorobenzene	2	0			10.0
	Pentachloronitrobenzene	2	0			100
	Pentachlorophenol	2	0			50.0
	Phenacetin	2	0			100
	Phenanthrene	2	0			10.0
	Phenol	2	0			10.0
	Pronamide	2	0			100
	Pyrene	2	0			10.0
	a,a-Dimethylphenethylamine	2	0			25.0
	bis(2-Chloroethoxy)methane	2	0			10.0
	bis(2-Chloroethyl)ether	2	0			10.0

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TABLE B.24 BLANK RESULTS FOR POST-TREATMENT TCLP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Semivolatile Organics				
Reagent				
bis(2-Chloroisopropyl)ether	2	0		10.0
bis(2-Ethylhexyl)phthalate	2	1	26.0 - 26.0	10.0
o-Cresol	2	0		10.0
p-Chloroaniline	2	0		20.0
p-Cresol	2	0		10.0
p-Dimethylaminoazobenzene	2	0		10.0
Metals, Cold Vapor				
TCLP blank				
Mercury	1	0		0.00020
preparation				
Mercury	18	1	0.00020 - 0.00020	0.00020
Metals, Graphite Furnace				
TCLP blank				
Arsenic, graphite AA	1	0		0.0020
Selenium, graphite AA	1	0		0.0050
Thallium, graphite AA	1	0		0.0020
preparation				
Arsenic, graphite AA	6	0		0.10
Lead, graphite AA	1	0		0.0020
Selenium, graphite AA	6	0		0.40
Thallium, graphite AA	7	0		0.20
Infrared Methods				
TCLP blank				
Oil and grease, infrared	1	0		0.40
Filterable Residue (TDS)				
TCLP blank				
Filterable Residue (TDS)	1	1	29.0 - 29.0	
analytical				
Filterable Residue (TDS)	2	1	16.0 - 16.0	6.0

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TABLE B.25 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = EP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, ICPES					
field duplicate					
Aluminum, ICPES	1	ND -	ND	NC	NC
Antimony, ICPES	1	ND -	ND	NC	NC
Barium, ICPES	1	1.5 -	1.5	0.14	9.4
Beryllium, ICPES	1	ND -	ND	NC	NC
Cadmium, ICPES	1	ND -	ND	NC	NC
Chromium, ICPES	1	0.075 -	0.075	0.00	0.0
Copper, ICPES	1	0.036 -	0.036	0.00	13.9
Lead, ICPES	1	ND -	ND	NC	NC
Nickel, ICPES	1	ND -	ND	NC	NC
Silver, ICPES	1	ND -	ND	NC	NC
Sodium, ICPES	1	ND -	ND	NC	NC
Zinc, ICPES	1	ND -	ND	NC	NC
Matrix duplicate					
Aluminum, ICPES	4	88.6 -	96.7	2.29	2.4
Antimony, ICPES	4	77.6 -	87.5	1.31	1.5
Barium, ICPES	4	85.0 -	93.5	4.15	4.7
Beryllium, ICPES	4	79.6 -	88.0	0.47	0.6
Cadmium, ICPES	4	80.0 -	85.2	0.59	0.7
Chromium, ICPES	4	79.9 -	82.0	0.42	0.5
Copper, ICPES	4	79.9 -	85.0	0.73	0.9
Lead, ICPES	3	ND -	80.5	1.80	2.3
Nickel, ICPES	4	80.0 -	83.7	0.61	0.7
Silver, ICPES	4	89.0 -	90.2	0.60	0.7
Sodium, ICPES	4	94.5 -	101	3.92	4.0
Zinc, ICPES	4	77.5 -	81.0	0.69	0.9
PCBs					
Analytical					
PCB-1016	2	ND -	ND	NC	NC
PCB-1221	2	ND -	ND	NC	NC
PCB-1232	2	ND -	ND	NC	NC
PCB-1242	2	ND -	ND	NC	NC
PCB-1248	2	ND -	ND	NC	NC

NC: Not Calculable
ND: NOt Detected

TABLE B.25 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = EP

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
PCB-1254	2	ND -	ND	NC	NC
PCB-1260	2	ND -	ND	NC	NC
field duplicate					
PCB-1016	1	ND -	ND	NC	NC
PCB-1221	1	ND -	ND	NC	NC
PCB-1232	1	ND -	ND	NC	NC
PCB-1242	1	ND -	ND	NC	NC
PCB-1248	1	ND -	ND	NC	NC
PCB-1254	1	ND -	ND	NC	NC
PCB-1260	1	ND -	ND	NC	NC
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	2	78.0 -	125	2.06	2.6
Dibutylchloroendate	2	83.5 -	97.0	3.20	3.6
PCB-1254	2	106 -	131	4.12	3.2
9040					
field duplicate					
pH	1	11.1 -	11.1	0.10	0.9
Metals, Cold Vapor					
field duplicate					
Mercury	1	ND -	ND	NC	NC
matrix duplicate					
Mercury	2	95.0 -	96.5	1.30	1.6
D-1498					
field duplicate					
Eh	1	8.5 -	8.5	23.34	274.6
Metals, Graphite Furnace					
field duplicate					
Arsenic, graphite AA	1	0.0020 -	0.0020	0.00	0.0

NC: Not Calculable
ND: NOt Detected

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TABLE B.25 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = EP

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Selenium, graphite AA	1	0.0040 - 0.0040	0.00	0.0
Thallium, graphite AA	1	0.00075 - 0.00075	0.00	47.1
matrix duplicate				
Arsenic, graphite AA	3	73.0 - 96.0	1.83	2.0
Lead, graphite AA	1	89.0 - 89.0	4.24	4.8
Selenium, graphite AA	4	0 - 49.0	1.58	70.7
Thallium, graphite AA	4	9.0 - 45.0	1.22	8.3
Infrared Methods				
field duplicate				
Oil and grease, infrared	1	3.8 - 3.8	0.14	3.7
Predigestion				
Oil and grease, infrared	1	4.1 - 4.1	0.21	5.2
Filterable Residue (TDS)				
field duplicate				
Filterable Residue (TDS)	1	9066 - 9066	279.35	3.1
Predigestion				
Filterable Residue (TDS)	2	9133 - 9263	112.85	1.2

NC: Not Calculable
ND: NOt Detected

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TABLE B 26 MATRIX SPIKE RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = EP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	1	91.4		0	0	80.0 - 120.0
Antimony, ICPES	3	93.0	3.5	0	0	80.0 - 120.0
Barium, ICPES	1	90.4		0	0	80.0 - 120.0
Beryllium, ICPES	1	93.0		0	0	80.0 - 120.0
Cadmium, ICPES	1	90.0		0	0	80.0 - 120.0
Copper, ICPES	1	90.5		0	0	80.0 - 120.0
Lead, ICPES	1	89.1		0	0	80.0 - 120.0
Nickel, ICPES	1	88.0		0	0	80.0 - 120.0
Silver, ICPES	1	92.0		0	0	80.0 - 120.0
Sodium, ICPES	1	98.3		0	0	80.0 - 120.0
Zinc, ICPES	1	92.0		0	0	80.0 - 120.0
matrix spike						
Aluminum, ICPES	6	91.4	3.6	0	0	80.0 - 120.0
Antimony, ICPES	7	81.7	5.0	4	0	80.0 - 120.0
Barium, ICPES	8	88.3	4.7	0	0	80.0 - 120.0
Beryllium, ICPES	8	84.1	4.2	2	0	80.0 - 120.0
Cadmium, ICPES	8	82.3	2.8	1	0	80.0 - 120.0
Chromium, ICPES	8	81.2	0.84	1	0	80.0 - 120.0
Copper, ICPES	8	83.6	2.5	1	0	80.0 - 120.0
Lead, ICPES	4	79.8	1.7	2	0	80.0 - 120.0
Nickel, ICPES	8	81.0	1.7	1	0	80.0 - 120.0
Silver, ICPES	8	89.3	0.71	0	0	80.0 - 120.0
Sodium, ICPES	8	98.6	4.0	0	0	80.0 - 120.0
Zinc, ICPES	8	79.1	1.8	4	0	80.0 - 120.0

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TABLE B 26 MATRIX SPIKE RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = EP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
matrix spike						
PCB-1254	4	118.5	14.8	0	1	29.0 - 131.0
Metals, Cold Vapor						
matrix spike						
Mercury	4	95.6	1.2	0	0	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	3	94.7	10.3	0	0	80.0 - 120.0
Lead, graphite AA	1	94.0		0	0	80.0 - 120.0
Selenium, graphite AA	2	97.0	18.4	0	0	80.0 - 120.0
Thallium, graphite AA	2	95.0	7.1	0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	6	101.7	43.7	4	2	80.0 - 120.0
Lead, graphite AA	2	89.0	4.2	0	0	80.0 - 120.0
Selenium, graphite AA	8	19.8	21.6	8	0	80.0 - 120.0
Thallium, graphite AA	8	26.8	14.3	8	0	80.0 - 120.0

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TABLE B 27 SURROGATE SPIKE RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = EP

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	17	78 1	33 2	1	0	17 0 - 152 0
Dibutylchlorendate	17	75 3	22 2	1	0	20 0 - 150 0

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TABLE B.28 BLANK RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Treated EP				
Metals, ICPES				
EP extraction blank				
Aluminum, ICPES	1	0		0.20
Antimony, ICPES	1	0		0.20
Barium, ICPES	1	0		0.010
Beryllium, ICPES	1	0		0.0020
Cadmium, ICPES	1	0		0.0050
Calcium, ICPES	1	1	1.0 - 1.0	
Chromium, ICPES	1	0		0.030
Copper, ICPES	1	1	0.030 - 0.030	
Lead, ICPES	1	0		0.050
Nickel, ICPES	1	0		0.020
Silver, ICPES	1	0		0.030
Sodium, ICPES	1	0		1.0
Zinc, ICPES	1	0		0.020
preparation				
Aluminum, ICPES	2	1	0.22 - 0.22	0.20
Antimony, ICPES	2	0		0.20
Barium, ICPES	2	0		0.010
Beryllium, ICPES	2	0		0.0020
Cadmium, ICPES	2	0		0.0050
Calcium, ICPES	3	3	1.1 - 1.7	
Chromium, ICPES	2	0		0.030
Copper, ICPES	2	2	0.060 - 0.090	
Lead, ICPES	1	0		0.050
Nickel, ICPES	2	0		0.020
Silver, ICPES	2	0		0.030
Sodium, ICPES	2	2	2.0 - 2.3	
Zinc, ICPES	2	1	0.021 - 0.021	0.020
PCBs				
EP extraction blank				
PCB-1016	2	0		0.11
PCB-1221	2	0		0.22
PCB-1232	2	0		0.22
PCB-1242	2	0		0.11
PCB-1248	2	0		0.11

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TABLE B.28 BLANK RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
PCBs				
EP extraction blank				
PCB-1254	2	0		0.22
PCB-1260	2	0		0.22
Reagent				
PCB-1016	2	0		0.020
PCB-1221	2	0		0.040
PCB-1232	2	0		0.040
PCB-1242	2	0		0.020
PCB-1248	2	0		0.020
PCB-1254	2	0		0.040
PCB-1260	1	0		0.040
Metals, Cold Vapor				
EP extraction blank				
Mercury	1	0		0.00020
preparation				
Mercury	2	0		0.00020
Metals, Graphite Furnace				
EP extraction blank				
Arsenic, graphite AA	1	0		0.0020
Lead, graphite AA	1	1	0.0050 - 0.0050	
Selenium, graphite AA	1	1	0.0040 - 0.0040	
Thallium, graphite AA	1	0		0.0010
preparation				
Arsenic, graphite AA	4	0		0.0020
Lead, graphite AA	2	2	0.0050 - 0.0060	
Selenium, graphite AA	4	0		0.0050
Thallium, graphite AA	4	0		0.0020
Infrared Methods				
EP extraction blank				
Oil and grease, infrared	1	0		0.40
analytical				
Oil and grease, infrared	2	0		0.40

TABLE B.2B BLANK RESULTS FOR POST-TREATMENT EP LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Filterable Residue (TDS)					
EP extraction blank					
	Filterable Residue (TDS)	1	1	67.0 - 67.0	
analytical					
	Filterable Residue (TDS)	2	1	24.2 - 24.2	6.0

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TABLE B.29 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = BET

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, ICPES				
field duplicate				
Aluminum, ICPES	3	ND - 0.70	0.14	20.2
Antimony, ICPES	3	ND - ND	NC	NC
Barium, ICPES	3	1.3 - 9.7	0.16	3.1
Beryllium, ICPES	3	ND - ND	NC	NC
Cadmium, ICPES	3	ND - ND	NC	NC
Calcium, ICPES	3	390 - 955	25.17	3.4
Chromium, ICPES	3	ND - ND	NC	NC
Copper, ICPES	3	0.020 - 0.17	0.01	41.9
Lead, ICPES	3	ND - 0.063	0.05	84.9
Nickel, ICPES	3	ND - 0.025	0.01	28.3
Silver, ICPES	3	ND - ND	NC	NC
Sodium, ICPES	3	4.5 - 79.0	0.91	10.4
Zinc, ICPES	3	ND - ND	NC	NC
matrix duplicate				
Aluminum, ICPES	7	87.0 - 99.0	1.38	1.4
Antimony, ICPES	7	80.5 - 94.6	1.67	1.9
Barium, ICPES	7	80.0 - 109	4.54	4.5
Beryllium, ICPES	7	82.9 - 94.5	0.68	0.7
Cadmium, ICPES	7	80.5 - 94.0	0.64	0.7
Chromium, ICPES	7	82.5 - 92.0	0.57	0.7
Copper, ICPES	7	84.5 - 95.0	0.94	1.0
Lead, ICPES	6	83.0 - 94.5	2.21	2.6
Nickel, ICPES	7	82.0 - 93.2	0.64	0.8
Silver, ICPES	7	84.5 - 91.5	0.77	0.9
Sodium, ICPES	7	80.0 - 106	5.06	5.2
Zinc, ICPES	7	82.0 - 95.0	0.55	0.6
PCBs				
Analytical				
PCB-1016	4	ND - ND	NC	NC
PCB-1221	4	ND - ND	NC	NC
PCB-1232	4	ND - ND	NC	NC
PCB-1242	4	ND - ND	NC	NC

NC: Not Calculable
ND: NOt Detected

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TABLE B.29 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = BET

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
PCB-1248	4	ND -	ND	NC	NC
PCB-1254	4	ND -	ND	NC	NC
PCB-1260	4	ND -	ND	NC	NC
field duplicate					
PCB-1016	3	ND -	ND	NC	NC
PCB-1221	3	ND -	ND	NC	NC
PCB-1232	3	ND -	ND	NC	NC
PCB-1242	3	ND -	ND	NC	NC
PCB-1248	3	ND -	ND	NC	NC
PCB-1254	3	ND -	ND	NC	NC
PCB-1260	3	ND -	ND	NC	NC
matrix duplicate					
2,4,5,6-Tetrachlorometaxylene	2	85.5 -	105	3.64	4.2
Dibutylchloroendate	2	91.5 -	109	0.71	0.7
PCB-1254	2	110 -	118	6.19	5.3
9040					
field duplicate					
pH	3	11.7 -	12.0	0.17	1.4
Metals, Cold Vapor					
field duplicate					
Mercury	3	ND -	ND	NC	NC
matrix duplicate					
Mercury	6	73.5 -	135	3.20	2.7
Predigestion					
Mercury	4	ND -	ND	NC	NC
D-1498					
field duplicate					
Eh	3	-101.5 -	-81.0	9.00	0.0

NC: Not Calculable
ND: NOt Detected

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TABLE B.29 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = BET

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, Graphite Furnace				
field duplicate				
Arsenic, graphite AA	3	0.0085 - 0.067	0.00	14.5
Selenium, graphite AA	3	ND - ND	NC	NC
Thallium, graphite AA	3	ND - ND	NC	NC
matrix duplicate				
Arsenic, graphite AA	6	56.0 - 93.0	2.52	3.3
Selenium, graphite AA	7	48.0 - 146	3.16	3.7
Thallium, graphite AA	7	52.0 - 111	5.29	8.5
Infrared Methods				
field duplicate				
Oil and grease, infrared	3	3.6 - 23.0	4.44	27.0
Total organic carbon	3	13.5 - 165	4.58	5.7
matrix duplicate				
Total organic carbon	3	96.5 - 114	3.00	2.8
Predigestion				
Oil and grease, infrared	4	5.7 - 53.5	0.59	1.8
Total organic carbon	2	34.5 - 44.7	1.24	3.0
Filterable Residue (TDS)				
field duplicate				
Filterable Residue (TDS)	3	1150 - 4400	129.12	6.1
Predigestion				
Filterable Residue (TDS)	3	1084 - 1734	4.99	0.4

NC: Not Calculable
ND: NOt Detected

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TABLE B.30 MATRIX SPIKE RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = BET

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	2	87.1	3.9	0	0	80.0 - 120.0
Antimony, ICPES	2	83.5	3.4	0	0	80.0 - 120.0
Barium, ICPES	2	87.8	4.6	0	0	80.0 - 120.0
Beryllium, ICPES	2	88.6	5.4	0	0	80.0 - 120.0
Cadmium, ICPES	2	86.3	4.0	0	0	80.0 - 120.0
Copper, ICPES	2	88.1	5.3	0	0	80.0 - 120.0
Lead, ICPES	2	85.9	6.6	0	0	80.0 - 120.0
Nickel, ICPES	2	85.1	4.5	0	0	80.0 - 120.0
Silver, ICPES	2	85.6	3.7	0	0	80.0 - 120.0
Sodium, ICPES	2	93.2	1.00	0	0	80.0 - 120.0
Zinc, ICPES	2	88.6	4.5	0	0	80.0 - 120.0
matrix spike						
Aluminum, ICPES	14	91.9	4.1	0	0	80.0 - 120.0
Antimony, ICPES	16	85.4	5.3	2	0	80.0 - 120.0
Barium, ICPES	15	92.5	9.8	0	0	80.0 - 120.0
Beryllium, ICPES	14	89.4	3.8	0	0	80.0 - 120.0
Cadmium, ICPES	14	87.2	4.6	0	0	80.0 - 120.0
Chromium, ICPES	14	86.7	3.1	0	0	80.0 - 120.0
Copper, ICPES	14	89.2	3.5	0	0	80.0 - 120.0
Lead, ICPES	12	88.1	4.7	1	0	80.0 - 120.0
Nickel, ICPES	14	85.8	4.2	0	0	80.0 - 120.0
Silver, ICPES	15	87.8	2.8	0	0	80.0 - 120.0
Sodium, ICPES	14	92.8	9.6	0	0	80.0 - 120.0
Zinc, ICPES	14	87.6	4.7	0	0	80.0 - 120.0

TABLE B.30 MATRIX SPIKE RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = BET

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
matrix spike						
PCB-1254	6	111.7	6.7	0	0	29.0 - 131.0
Metals, Cold Vapor						
matrix spike						
Mercury	13	102.2	18.7	2	2	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	3	86.7	1.2	0	0	80.0 - 120.0
Selenium, graphite AA	4	86.0	8.3	1	0	80.0 - 120.0
Thallium, graphite AA	6	95.0	6.3	0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	12	81.5	16.6	4	0	80.0 - 120.0
Selenium, graphite AA	14	83.1	31.7	8	2	80.0 - 120.0
Thallium, graphite AA	14	76.6	21.2	8	0	80.0 - 120.0
Infrared Methods						
method spike						
Total organic carbon	1	88.7		0	0	80.0 - 120.0
matrix spike						
Total organic carbon	8	124.2	41.5	0	2	80.0 - 120.0

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TABLE B.31 SURROGATE SPIKE RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = BET

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	47	87.9	32.6	3	1	17.0 - 152.0
Dibutylchlorendate	47	81.6	16.8	0	0	20.0 - 150.0

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TABLE B.32 BLANK RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Treated BET				
Metals, ICPES preparation				
Aluminum, ICPES	3	0		0.20
Antimony, ICPES	3	0		0.20
Barium, ICPES	3	0		0.010
Beryllium, ICPES	3	0		0.0020
Cadmium, ICPES	3	0		0.0050
Calcium, ICPES	6	5	1.1 - 1.6	1.0
Chromium, ICPES	5	0		0.030
Copper, ICPES	3	0		0.020
Lead, ICPES	3	1	0.056 - 0.056	0.050
Nickel, ICPES	3	1	0.021 - 0.021	0.020
Silver, ICPES	3	0		0.030
Sodium, ICPES	3	2	1.2 - 2.1	1.0
Zinc, ICPES	3	0		0.020
PCBs Reagent				
PCB-1016	2	0		0.020
PCB-1221	2	0		0.040
PCB-1232	2	0		0.040
PCB-1242	2	0		0.020
PCB-1248	2	0		0.020
PCB-1254	2	0		0.040
PCB-1260	2	0		0.040
Metals, Cold Vapor preparation				
Mercury	21	0		0.00020
Metals, Graphite Furnace preparation				
Arsenic, graphite AA	5	0		0.0020
Lead, graphite AA	1	1	0.0030 - 0.0030	
Selenium, graphite AA	6	0		0.0040
Thallium, graphite AA	5	0		0.0020

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TABLE B.32 BLANK RESULTS FOR POST-TREATMENT BET LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Infrared Methods					
analytical					
	Oil and grease, infrared	3	0		0.40
preparation					
	Total organic carbon	17	15	1.0 - 1.9	1.0
Filterable Residue (TDS)					
analytical					
	Filterable Residue (TDS)	2	0		6.0

TABLE B.33 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = ANS 16.1

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
Metals, ICPES				
field duplicate				
Aluminum, ICPES	5	0.50 - 0.70	0.22	34.1
Antimony, ICPES	5	ND - ND	NC	NC
Barium, ICPES	5	0.33 - 0.43	0.02	3.8
Beryllium, ICPES	5	ND - ND	NC	NC
Cadmium, ICPES	5	ND - ND	NC	NC
Calcium, ICPES	5	89.5 - 97.5	5.54	6.0
Chromium, ICPES	5	ND - ND	NC	NC
Copper, ICPES	5	ND - ND	NC	NC
Lead, ICPES	5	ND - ND	NC	NC
Nickel, ICPES	5	ND - ND	NC	NC
Silver, ICPES	5	ND - 0.055	0.02	38.6
Sodium, ICPES	5	9.7 - 18.0	0.73	4.5
Zinc, ICPES	5	ND - 0.050	0.06	113.2
Matrix duplicate				
Aluminum, ICPES	5	78.5 - 95.5	1.59	1.9
Antimony, ICPES	5	78.1 - 88.0	3.06	3.7
Barium, ICPES	5	76.4 - 94.0	3.52	4.4
Beryllium, ICPES	5	79.6 - 96.5	2.45	2.9
Cadmium, ICPES	5	75.0 - 95.0	2.28	2.8
Chromium, ICPES	6	75.3 - 94.0	2.20	2.7
Copper, ICPES	5	76.5 - 95.5	1.94	2.3
Lead, ICPES	4	77.5 - 98.5	1.54	1.8
Nickel, ICPES	5	75.9 - 93.0	2.72	3.2
Silver, ICPES	5	75.5 - 91.0	1.87	2.3
Sodium, ICPES	5	88.5 - 107	5.24	5.8
Zinc, ICPES	5	76.5 - 96.0	2.18	2.6
PCBs				
Analytical				
PCB-1016	3	ND - ND	NC	NC
PCB-1221	3	ND - ND	NC	NC
PCB-1232	3	ND - ND	NC	NC
PCB-1242	3	ND - ND	NC	NC

NC: Not Calculable
ND: NOt Detected

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TABLE B.33 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = ANS 16.1

Parameter	# of Pairs	Range of Means	Pooled SD	Pooled CV
PCB-1248	3	ND - ND	NC	NC
PCB-1254	3	ND - ND	NC	NC
PCB-1260	3	ND - ND	NC	NC
field duplicate				
PCB-1016	5	ND - ND	NC	NC
PCB-1221	5	ND - ND	NC	NC
PCB-1232	5	ND - ND	NC	NC
PCB-1242	5	ND - ND	NC	NC
PCB-1248	5	ND - ND	NC	NC
PCB-1254	5	ND - ND	NC	NC
PCB-1260	5	ND - ND	NC	NC
matrix duplicate				
2,4,5,6-Tetrachlorometaxylene	3	36.5 - 87.5	24.72	66.3
Dibutylchloroendate	3	46.5 - 106	32.66	68.3
PCB-1254	3	67.5 - 98.5	46.27	68.5
9040				
field duplicate				
pH	5	10.9 - 11.3	0.04	0.4
Metals, Cold Vapor				
field duplicate				
Mercury	10	ND - 0.00015	0.00	47.1
matrix duplicate				
Mercury	4	92.5 - 119	1.90	2.0
Predigestion				
Mercury	3	ND - 0.00050	1.90	2.0
D-1498				
field duplicate				
Eh	5	-70.0 - -23.0	3.77	0.0

NC: Not Calculable
ND: NOt Detected

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TABLE B.33 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = ANS 16.1

Parameter	# of Pairs	Range of Means		Pooled SD	Pooled CV
Metals, Graphite Furnace					
field duplicate					
Arsenic, graphite AA	5	ND -	ND	NC	NC
Selenium, graphite AA	5	ND -	ND	NC	NC
Thallium, graphite AA	5	ND -	ND	NC	NC
matrix duplicate					
Arsenic, graphite AA	4	81.0 -	97.0	1.22	1.4
Lead, graphite AA	1	42.0 -	42.0	0.00	0.0
Selenium, graphite AA	4	89.0 -	119	1.22	1.2
Thallium, graphite AA	5	75.0 -	87.0	3.29	4.1
Infrared Methods					
field duplicate					
Oil and grease, infrared	5	ND -	ND	NC	NC
Total organic carbon	5	5.5 -	6.3	0.53	9.7
matrix duplicate					
Total organic carbon	5	88.5 -	101	1.87	2.0
Predigestion					
Oil and grease, infrared	3	ND -	2.1	0.06	4.1
Total organic carbon	6	6.8 -	20.0	0.52	4.3
Filterable Residue (TDS)					
field duplicate					
Filterable Residue (TDS)	9	305 -	395	17.64	5.1
Predigestion					
Filterable Residue (TDS)	6	195 -	881	11.47	1.7

NC: Not Calculable
ND: NOt Detected

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TABLE B 34 MATRIX SPIKE RESULTS FOR POST TREATMENT ANS 16 1 LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = ANS 16 1

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
Metals, ICPES						
method spike						
Aluminum, ICPES	5	91 0	4 0	0	0	80 0 - 120 0
Antimony, ICPES	5	91 9	1.9	0	0	80 0 - 120 0
Barium, ICPES	5	90 0	4.9	0	0	80 0 - 120 0
Beryllium, ICPES	4	93 7	3 7	0	0	80 0 - 120 0
Cadmium, ICPES	4	89 4	6 4	0	0	80 0 - 120 0
Chromium, ICPES	1	87 1		0	0	80 0 - 120 0
Copper, ICPES	4	90 7	6 4	0	0	80 0 - 120 0
Lead, ICPES	3	91 2	6.8	0	0	80 0 - 120 0
Nickel, ICPES	4	89 6	4 9	0	0	80 0 - 120 0
Silver, ICPES	4	89 6	4 0	0	0	80 0 - 120 0
Sodium, ICPES	4	99 3	12.0	0	0	80 0 - 120 0
Zinc, ICPES	5	91 4	6.2	0	0	80 0 - 120 0
matrix spike						
Aluminum, ICPES	10	87 4	6 0	1	0	80 0 - 120 0
Antimony, ICPES	10	83 5	4 5	2	0	80 0 - 120 0
Barium, ICPES	10	88 3	13.1	3	0	80 0 - 120 0
Beryllium, ICPES	10	88 3	7.1	1	0	80 0 - 120 0
Cadmium, ICPES	10	85 0	8.1	4	0	80 0 - 120 0
Chromium, ICPES	10	84 7	8 4	4	0	80 0 - 120 0
Copper, ICPES	10	86 1	7 8	3	0	80 0 - 120 0
Lead, ICPES	8	87 1	8 2	2	0	80 0 - 120 0
Nickel, ICPES	10	84 7	7 7	4	0	80 0 - 120 0
Silver, ICPES	10	83 8	5.9	3	0	80 0 - 120 0
Sodium, ICPES	10	93 9	8 6	0	0	80 0 - 120 0
Zinc, ICPES	10	86 2	8.2	4	0	80.0 - 120 0

TABLE B 34 MATRIX SPIKE RESULTS FOR POST-TREATMENT AMS 16 1 LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = AMS 16 1

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
matrix spike						
PCB-1254	6	84.5	38.5	1	0	29.0 - 131.0
Metals, Cold Vapor						
matrix spike						
Mercury	8	101.6	11.1	0	0	80.0 - 120.0
Metals, Graphite Furnace						
method spike						
Arsenic, graphite AA	4	87.0	3.5	0	0	80.0 - 120.0
Selenium, graphite AA	4	98.5	10.6	0	0	80.0 - 120.0
Thallium, graphite AA	3	92.0	2.0	0	0	80.0 - 120.0
matrix spike						
Arsenic, graphite AA	8	88.7	7.4	0	0	80.0 - 120.0
Lead, graphite AA	2	42.0	0	2	0	80.0 - 120.0
Selenium, graphite AA	8	180.7	12.0	0	0	80.0 - 120.0
Thallium, graphite AA	10	81.0	5.5	4	0	80.0 - 120.0
Infrared Methods						
method spike						
Total organic carbon	1	85.7		0	0	80.0 - 120.0
matrix spike						
Total organic carbon	10	93.0	4.6	0	0	80.0 - 120.0

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TABLE B 35 SURROGATE SPIKE RESULTS FOR POST-TREATMENT ANS 16 1 LEACHATES

SUMMARY RESULTS

SAMPLE MATRIX = Treated SUBMATRIX = ANS 16 1

Parameter	Number of Samples	Mean % Recovery	Standard Deviation	Number Below Acceptance Limits	Number Above Acceptance Limits	(Matrix) Acceptance Criteria
PCBs						
Surrogate spike						
2,4,5,6-Tetrachlorometaxylene	51	81 5	17 2	1	0	17 0 - 152 0
Dibutylchlorendate	51	92 3	14 1	1	0	20 0 - 150 0

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TABLE B.36 BLANK RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

SUMMARY RESULTS

Method Type / Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Treated ANS 16.1				
Metals, ICPES preparation				
Aluminum, ICPES	7	0		0.20
Antimony, ICPES	7	0		0.20
Barium, ICPES	7	0		0.010
Beryllium, ICPES	7	0		0.0020
Cadmium, ICPES	7	0		0.0050
Calcium, ICPES	8	8	1.1 - 2.4	
Chromium, ICPES	5	0		0.030
Copper, ICPES	7	0		0.020
Lead, ICPES	6	0		0.050
Nickel, ICPES	7	0		0.020
Silver, ICPES	7	2	0.033 - 0.049	0.030
Sodium, ICPES	8	7	1.4 - 4.7	1.0
Zinc, ICPES	7	0		0.020
PCBs Reagent				
PCB-1016	3	0		0.020
PCB-1221	3	0		0.040
PCB-1232	3	0		0.040
PCB-1242	3	0		0.020
PCB-1248	3	0		0.020
PCB-1254	3	0		0.040
PCB-1260	3	0		0.040
Metals, Cold Vapor preparation				
Mercury	16	0		0.00020
Metals, Graphite Furnace preparation				
Arsenic, graphite AA	4	0		0.0050
Selenium, graphite AA	2	0		0.0040
Thallium, graphite AA	3	1	0.0020 - 0.0020	0.0020

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TABLE B.36 BLANK RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

SUMMARY RESULTS

Method Type	Parameter	Total Number of Blanks	Total Number above Detection Limit	Concentration Range Minimum - Maximum	Maximum Detection Limit
Infrared Methods					
analytical					
	Oil and grease, infrared	4	0		0.40
preparation					
	Total organic carbon	14	13	1.0 - 1.9	1.0
Filterable Residue (TDS)					
analytical					
	Filterable Residue (TDS)	5	2	14.0 - 16.0	6.0

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ATTACHMENT A

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ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Metals, ICPES							
matrix duplicate							
Aluminum, ICPES	8902310 01	8902310 01a	99.3	118	109	13.2	12.1
Aluminum, ICPES	88-12-064 03	88-12-064 04	260	172	216	62.2	28.8
Aluminum, ICPES	8812064 03A	8812064 04A	137	74.0	106	44.5	42.2
Antimony, ICPES	88-12-064 03	8812064 04	80.0	70.0	75.0	7.1	9.4
Antimony, ICPES	88-12-064 03	88-12-064 04	430	462	446	22.6	5.1
Arsenic, ICPES	88-12-064 03	88-12-064 04	95.0	92.0	93.5	2.1	2.3
Barium, ICPES	88-12-064 03	8812064 04	203	314	259	78.5	30.4
Barium, ICPES	88-12-064 03	8812064 04	84.0	90.0	87.0	4.2	4.9
Beryllium, ICPES	88-12-064 03	88-12-064 04	89.0	87.0	88.0	1.4	1.6
Cadmium, ICPES	8902310 01	8902310 01a	88.2	86.4	87.3	1.3	1.5
Cadmium, ICPES	88-12-064 03	88-12-064 04	102	110	106	5.7	5.3
Calcium, ICPES	88-12-064 03	88-12-064 04	466	224	345	171	49.6
Calcium, ICPES	88-12-064 03	8812064 04	100	71.0	85.5	20.5	24.0
Chromium, ICPES	8812064 03A	8812064 04A	105	115	110	7.1	6.4
Chromium, ICPES	8902310 01	8902310 01a	87.2	86.3	86.8	0.64	0.73

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Copper, ICPES	8812064 03A	8812064 04A	128	105	117	16.3	14.0
Copper, ICPES	8902310 01	8902310 01a	88.5	89.4	89.0	0.64	0.72
Lead, ICPES	8812064 03A	8812064 04A	83.0	84.0	83.5	0.71	0.85
Lead, ICPES	8902310 01	8902310 01a	108	128	118	13.9	11.8
Nickel, ICPES	8812064 03A	8812064 04A	86.0	14.0	50.0	50.9	102
Nickel, ICPES	8902310 01	8902310 01a	77.2	76.0	76.6	0.85	1.1
Selenium, ICPES	8812064 03A	8812064 04A	0	0	0	0	
Silver, ICPES	88-12-064 03	8812064 04	0	0	0	0	
Silver, ICPES	8812064 03A	8812064 04A	50.0	52.0	51.0	1.4	2.8
Silver, ICPES	8902310 01	8902310 01a	81.3	80.6	80.9	0.49	0.61
Sodium, ICPES	8812064 03A	8812064 04A	98.0	81.0	89.5	12.0	13.4
Thallium, ICPES	8812064 03A	8812064 04A	148	210	179	43.8	24.5
Zinc, ICPES	8812064 03A	8812064 04A	91.0	113	102	15.6	15.3
Zinc, ICPES	8902310 01	8902310 01a	78.2	76.8	77.5	0.99	1.3
Predigestion							
Aluminum, ICPES	88-12-064 09	88-12-064 16	5330	5330	5330	0	0
Aluminum, ICPES	88-12-064 01	88-12-064 01a	3360	3310	3335	35.4	1.1
Aluminum, ICPES	88-12-064 07	88-12-064 15	7760	8670	8215	643	7.8

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Antimony, ICPES	88-12-064 01	88-12-064 01a	9.9	ND	9.7	ND	ND	NC	NC
Antimony, ICPES	88-12-064 09	88-12-064 16	9.7	ND	9.6	ND	ND	NC	NC
Antimony, ICPES	88-12-064 07	88-12-064 15	9.7	ND	9.8	ND	ND	NC	NC
Arsenic, ICPES	88-12-064 07	88-12-064 15	59.4		68.3		63.9	6.3	9.9
Arsenic, ICPES	88-12-064 01	88-12-064 01a	111		112		112.	0.71	0.63
Arsenic, ICPES	88-12-064 09	88-12-064 16	49.7		48.5		49.1	0.85	1.7
Barium, ICPES	88-12-064 01	88-12-064 01a	673		696		685	16.3	2.4
Barium, ICPES	88-12-064 07	88-12-064 15	2490		2460		2475	21.2	0.86
Barium, ICPES	88-12-064 09	88-12-064 16	1400		1480		1440	56.6	3.9
Beryllium, ICPES	88-12-064 07	88-12-064 15	0.11	<5X	0.16	<5X	0.13	0.039	28.9
Beryllium, ICPES	88-12-064 01	88-12-064 01a	0.24	<5X	0.21	<5X	0.23	0.016	6.9
Beryllium, ICPES	88-12-064 09	88-12-064 16	0.12	<5X	0.16	<5X	0.14	0.030	22.1
Cadmium, ICPES	88-12-064 09	88-12-064 16	0.95	<5X	0.94	<5X	0.94	0.0057	0.60
Cadmium, ICPES	88-12-064 01	88-12-064 01a	1.7		1.5		1.6	0.13	8.3
Cadmium, ICPES	88-12-064 07	88-12-064 15	0.24	ND	0.24	ND	ND	NC	NC
Calcium, ICPES	88-12-064 07	88-12-064 15	466		446		456	14.1	3.1
Calcium, ICPES	88-12-064 01	88-12-064 01a	3750		3940		3845	134	3.5
Calcium, ICPES	88-12-064 09	88-12-064 16	1230		1240		1235	7.1	0.57
Chromium, ICPES	88-12-064 07	88-12-064 15	3.1	<5X	3.0	<5X	3.0	0.071	2.4

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Chromium, ICPES	88-12-064 01	88-12-064 01a	11.3		10.9		11.1	0.28	2.5
Chromium, ICPES	88-12-064 09	88-12-064 16	4.9	<5X	5.4	<5X	5.1	0.36	7.0
Copper, ICPES	88-12-064 09	88-12-064 16	29.2		31.3		30.3	1.5	4.9
Copper, ICPES	88-12-064 01	88-12-064 01a	32.3		33.5		32.9	0.85	2.6
Copper, ICPES	88-12-064 07	88-12-064 15	17.7		16.8		17.3	0.64	3.7
Lead, ICPES	88-12-064 09	88-12-064 16	1960		2220		2090	184	8.8
Lead, ICPES	88-12-064 07	88-12-064 15	2680		2640		2660	28.3	1.1
Lead, ICPES	88-12-064 01	88-12-064 01a	634		631		633	2.1	0.34
Nickel, ICPES	88-12-064 09	88-12-064 16	2.8	<5X	3.8	<5X	3.3	0.69	20.7
Nickel, ICPES	88-12-064 07	88-12-064 15	1.1	<5X	1.1	<5X	1.1	0	0
Nickel, ICPES	88-12-064 01	88-12-064 01a	3.0		2.5		2.7	0.35	13.0
Selenium, ICPES	88-12-064 09	88-12-064 16	14.6	ND	14.4	ND	ND	NC	NC
Selenium, ICPES	88-12-064 01	88-12-064 01a	14.8	ND	14.6	ND	ND	NC	NC
Selenium, ICPES	88-12-064 07	88-12-064 15	14.5	ND	14.6	ND	ND	NC	NC
Silver, ICPES	88-12-064 01	88-12-064 01a	1.5	ND	1.5	ND	ND	NC	NC
Silver, ICPES	88-12-064 09	88-12-064 16	1.5	ND	1.4	ND	ND	NC	NC
Silver, ICPES	88-12-064 07	88-12-064 15	1.5	ND	1.5	ND	ND	NC	NC
Sodium, ICPES	88-12-064 07	88-12-064 15	66.4		56.7		61.6	6.9	11.1
Sodium, ICPES	88-12-064 09	88-12-064 16	974		1010		992	25.5	2.6
Sodium, ICPES	88-12-064 01	88-12-064 01a	72.1	<5X	77.8	<5X	74.9	4.0	5.4

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Thallium, ICPES	88-12-064 01	88-12-064 01a	5.5	<5X	4.8	<5X	5.2	0.45	8.8
Thallium, ICPES	88-12-064 07	88-12-064 15	2.4	ND	10.3	<5X	6.4	5.6	87.7
Thallium, ICPES	88-12-064 09	88-12-064 16	10.2	<5X	2.4	ND	6.3	5.5	87.5
Zinc, ICPES	88-12-064 07	88-12-064 15	9.9		9.8		9.8	0.092	0.94
Zinc, ICPES	88-12-064 01	88-12-064 01a	126		125		126	0.71	0.56
Zinc, ICPES	88-12-064 09	88-12-064 16	104		118		111	9.9	8.9
PCBs									
matrix duplicate									
2,4,5,6-Tetrachlorometaxylene	A812065 02C	A812065 02D	109		105		107	2.8	2.6
Dibutylchloroendate	A812065 02C	A812065 02D		C		C	0	0	
PCB-1260	A812065 02C	A812065 02D	77.0		90.0		83.5	9.2	11.0
Volatile Organics, Matrix Spike									
matrix duplicate									
1,1-Dichloroethene	A812065 08B	A812065 08C	77.0		89.0		83.0	8.5	10.2
1,2-Dichloroethane-d4	A812065 08B	A812065 08C	99.0		97.0		98.0	1.4	1.4
Benzene	A812065 08B	A812065 08C	86.0		100		93.0	9.9	10.6

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Chlorobenzene	A812065 08B	A812065 08C	98.0	116	107	12.7	11.9
Toluene	A812065 08B	A812065 08C	79.0	110	94.5	21.9	23.2
Toluene-d8	A812065 08B	A812065 08C	97.0	97.0	97.0	0	0
Trichloroethene	A812065 08B	A812065 08C	88.0	111	99.5	16.3	16.3
p-Bromofluorobenzene	A812065 08B	A812065 08C	98.0	99.0	98.5	0.71	0.72
Semivolatile Organics, Matrix Spike matrix duplicate							
1,2,4-Trichlorobenzene	A812065 05B	A812065 05C	95.0	88.0	91.5	4.9	5.4
1,4-Dichlorobenzene	A812065 05B	A812065 05C	84.0	85.0	84.5	0.71	0.84
2,4,6-Tribromophenol	A812065 05B	A812065 05C	112	108	110	2.8	2.6
2,4-Dinitrotoluene	A812065 05B	A812065 05C	33.0	89.0	61.0	39.6	64.9
2-Chlorophenol	A812065 05B	A812065 05C	87.0	92.0	89.5	3.5	4.0
2-Fluorobiphenyl	A812065 05B	A812065 05C	99.0	103	101	2.8	2.8

NC: Not Calculable.
ND: Not Detected.
C: Not able to recover due to silica gel cleanup.

ATTACHMENT A 1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
2-Fluorophenol	A812065 05B	A812065 05C	87.0	91.0	89.0	2.8	3.2
Acenaphthene	A812065 05B	A812065 05C	80.0	84.0	82.0	2.8	3.4
Di-n-propylnitrosamine	A812065 05B	A812065 05C	39.0	36.0	37.5	2.1	5.7
Nitrobenzene-d5	A812065 05B	A812065 05C	39.0	99.0	69.0	42.4	61.5
Nitrophenol	A812065 05B	A812065 05C	69.0	59.0	64.0	7.1	11.0
Pentachlorophenol	A812065 05B	A812065 05C	128	134	131	4.2	3.2
Phenol	A812065 05B	A812065 05C	78.0	79.0	78.5	0.71	0.90
Phenol-d5	A812065 05B	A812065 05C	114	120	117	4.2	3.6
Pyrene	A812065 05B	A812065 05C	68.0	60.0	64.0	5.7	8.8
Terphenyl-d14	A812065 05B	A812065 05C	69.0	89.0	79.0	14.1	17.9
p-Chloro-m-cresol	A812065 05B	A812065 05C	87.0	88.0	87.5	0.71	0.81
9040							
Field duplicate							
pH	206 SWL	206D SWL	3.4	3.4	3.4	0.021	0.63

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A 1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
ASA-13-2									
field duplicate									
Bulk Density	123 SWL	124 SWL	1.1		1.3		1.2	0.11	8.9
Bulk Density	223 SWL	224 SWL	1.2		1.0		1.1	0.14	12.6
Metals, Cold Vapor									
matrix duplicate									
Mercury	8902310 01	8902310 01a	84.6		85.5		85.1	0.64	0.75
Mercury	8812064 03A	8812064 04A	79.0		72.0		75.5	4.9	6.6
Predigestion									
Mercury	88-12-064 01	88-12-064 01	0.17	<5X	0.16	<5X	0.17	0.0071	4.3
D-1498									
field duplicate									
Eh	206 SWL	206D SWL	404		402		403	1.4	0.35
D-2216									
field duplicate									
Water Content	219 SWL	219D SWL	20.1		30.5		25.3	7.4	29.1

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
D-422									
Field duplicate									
Mean Particle Size	219 SWL	219D SWL	0.22		0.26		0.24	0.028	11.8
Metals, Graphite Furnace									
matrix duplicate									
Arsenic, graphite AA	8902310 01	8903210 01a	222		159		190	44.7	23.5
Arsenic, graphite AA	88-12-064 03a	88-12-064 04a	0		0		0	0	
Selenium, graphite AA	8812064 03A	8812064 04A	42.0		62.0		52.0	14.1	27.2
Selenium, graphite AA	8902310 01	8902310 01a	87.9		84.0		86.0	2.8	3.2
Thallium, graphite AA	8812064 03A	8812064 04A	73.0		73.0		73.0	0	0
Thallium, graphite AA	8902310 01	8902310 01a	49.8		50.8		50.3	0.71	1.4
Predigestion									
Arsenic, graphite AA	88-12-064 01	88-12-064 01a	85.8		98.6		92.2	9.1	9.8
Arsenic, graphite AA	88-12-064 07	88-12-064 15	20.0		18.0		19.0	1.4	7.4
Arsenic, graphite AA	88-12-064 09	88-12-064 16	13.0		15.8		14.4	2.0	13.7
Selenium, graphite AA	88-12-064 01	88-12-064 01	0.29	<5X	0.31	<5X	0.30	0.016	5.2
Selenium, graphite AA	88-12-064 07	88-12-064 15	0.25	ND	0.24	ND	ND	NC	NC
Selenium, graphite AA	88-12-064 09	88-12-064 16	0.25	ND	0.24	ND	ND	NC	NC

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A 1 DUPLICATE RESULTS FOR PRETREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Thallium, graphite AA	88-12-064 07	88-12-064 15	0.21	<5X	0.27	<5X	0.24	0.042	17.7
Thallium, graphite AA	88-12-064 01	88-12-064 01	0.050	ND	0.050	ND	ND	NC	NC
Thallium, graphite AA	88-12-064 09	88-12-064 16	0.060	ND	0.060	ND	ND	NC	NC
Infrared Methods									
Predigestion									
Oil and grease, infrared	88-12-064 01	88-12-064 01a	29156		28536		28846	438	1.5
Oil and grease, infrared	88-12-064 01	88-12-064 01a	22197		29156		25677	4921	19.2
LOI									
Predigestion									
Loss on ignition at 550C	88-12-064 07	88-12-064 15	527000		529000		528000	1414	0.27
Loss on ignition at 550C	89-02-281 10	8902281 10a	723000		749000		736000	18385	2.5
Loss on ignition at 550C	89-02-281 11	8902281 11a	724000		723000		723500	707	0.098

NC: Not Calculable.

ND: Not Detected.

C: Not able to recover due to silica gel cleanup.

ATTACHMENT A 2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	8901083 06E	8901083 07E	0.50	<5X	0.40	<5X	0.45	0.071	15.7
Antimony, ICPES	8901083 06E	8901083 07E	0.20	ND	0.20	ND	ND	NC	NC
Barium, ICPES	8901083 06E	8901083 07E	1.1		0.92		1.0	0.13	12.6
Beryllium, ICPES	8901083 06E	8901083 07E	0.0020	ND	0.0020	ND	ND	NC	NC
Cadmium, ICPES	8901083 06E	8901083 07E	0.0070	<5X	0.0025	ND	0.0048	0.0032	67.0
Calcium, ICPES	8901083 06E	8901083 07E	9.9		9.1		9.5	0.57	6.0
Chromium, ICPES	8903181 26A	8903181 27A	0.030	ND	0.030	ND	ND	NC	NC
Copper, ICPES	8901083 06E	8901083 07E	0.030	<5X	0.030	<5X	0.030	0	0
Lead, ICPES	8901083 06E	8901083 07E	4.8		3.7		4.3	0.78	18.3
Nickel, ICPES	8901083 06E	8901083 07E	0.010	ND	0.020	<5X	0.015	0.0071	47.1
Silver, ICPES	8901083 06E	8901083 07E	0.030	ND	0.030	ND	ND	NC	NC
Sodium, ICPES	8901083 06E	8901083 07E	1100		1100		1100	0	0

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Zinc, ICPES	8901083 06E	8901083 07E	0.070	<5X	0.050	<5X	0.060	0.014	23.6
matrix duplicate									
Aluminum, ICPES	89-03-254 01	89-03-254 01a	93.8		92.8		93.3	0.71	0.76
Aluminum, ICPES	89-01-083 01	89-01-083 01a	86.0		87.0		86.5	0.71	0.82
Antimony, ICPES	89-01-083 01	89-01-083 01a	83.0		82.0		82.5	0.71	0.86
Antimony, ICPES	89-03-254 01	89-03-254 01a	98.5		96.2		97.4	1.6	1.7
Arsenic, ICPES	89-01-083 01	89-01-083 02	80.0		140		110	42.4	38.6
Barium, ICPES	89-01-083 01	89-01-083 01a	270		280		275	7.1	2.6
Barium, ICPES	89-03-254 01	89-03-254 01a	299		300		299	0.64	0.21
Beryllium, ICPES	89-03-254 01	89-03-254 01a	112		112		112	0	0
Beryllium, ICPES	89-01-083 01	89-01-083 01a	110		110		110	0	0
Cadmium, ICPES	89-03-254 01	89-03-254 01a	112		113		113	0.71	0.63
Cadmium, ICPES	89-01-083 01	89-01-083 01a	98.0		100		99.0	1.4	1.4
Calcium, ICPES	89-03-254 01	89-03-254 01a	110		130		120	14.1	11.8
Calcium, ICPES	89-01-083 01	89-01-083 01a	100		100		100	0	0
Chromium, ICPES	89-03-254 01	89-03-254 01a	109		110		110	0.71	0.65
Chromium, ICPES	89-03-181 19	89-03-181 19a	103		104		104	0.71	0.68

NC: Not Calculable.

ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Copper, ICPES	89-03-254 01	89-03-254 01a	113	113	113	0	0
Copper, ICPES	89-01-083 01	89-01-083 01a	110	110	110	0	0
Lead, ICPES	89-03-254 01	89-03-254 01a	87.8	87.8	87.8	0	0
Lead, ICPES	89-01-083 01	89-01-083 01a	81.0	81.0	81.0	0	0
Nickel, ICPES	89-03-254 01	89-03-254 01a	111	111	111	0	0
Nickel, ICPES	89-01-083 01	89-01-083 01a	98.0	108	103	7.1	6.9
Selenium, ICPES	89-01-083 01	89-01-083 02	0	0	0	0	
Silver, ICPES	89-01-083 01	89-01-083 01a	83.0	83.0	83.0	0	0
Silver, ICPES	89-03-254 01	89-03-254 01a	92.3	91.3	91.8	0.71	0.77
Sodium, ICPES	89-01-083 01	89-01-083 01a	0	0	0	0	
Sodium, ICPES	89-03-254 01	89-03-254 01a	0	0	0	0	
Zinc, ICPES	89-01-083 01	89-01-083 01a	173	183	178	7.1	4.0
Zinc, ICPES	89-03-254 01	89-03-254 01a	186	188	187	1.4	0.76
PCBs							
Analytical							
PCB-1016	8901083 03A	8901083 03F	0.42 ND	0.42 ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1221	8901083 03A	8901083 03F	0.42	ND	0.42	ND	ND	NC	NC
PCB-1232	8901083 03A	8901083 03F	0.83	ND	0.83	ND	ND	NC	NC
PCB-1242	8901083 03A	8901083 03F	0.42	ND	0.42	ND	ND	NC	NC
PCB-1248	8901083 03A	8901083 03F	0.42	ND	0.42	ND	ND	NC	NC
PCB-1254	8901083 03A	8901083 03F	0.83	ND	0.83	ND	ND	NC	NC
PCB-1260	8901083 03A	8901083 03F	0.83	ND	0.83	ND	ND	NC	NC
field duplicate									
PCB-1016	8901083 06A	8901083 07A	0.42	ND	0.42	ND	ND	NC	NC
PCB-1221	8901083 06A	8901083 07A	0.42	ND	0.42	ND	ND	NC	NC
PCB-1232	8901083 06A	8901083 07A	0.84	ND	0.84	ND	ND	NC	NC
PCB-1242	8901083 06A	8901083 07A	0.42	ND	0.42	ND	ND	NC	NC
PCB-1248	8901083 06A	8901083 07A	0.42	ND	0.42	ND	ND	NC	NC
PCB-1254	8901083 06A	8901083 07A	0.84	ND	0.84	ND	ND	NC	NC
PCB-1260	8901083 06A	8901083 07A	0.84	ND	0.84	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
matrix duplicate									
2,4,5,6-Tetrachlorometaxylene	8901099 01A	8901099 02A	114		104		109	7.1	6.5
Dibutylchloroendate	8901099 01A	8901099 02A	107		86.0		96.5	14.8	15.4
PCB-1254	8901099 01A	8901099 02A	150		141		146	6.4	4.4
Volatile Organics									
field duplicate									
1,1,1-Trichloroethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,1,2,2-Tetrachloroethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,1,2-Trichloroethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,1-Dichloroethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,1-Dichloroethene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,2,3-Trichloropropane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,2-Dichloroethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
1,2-Dichloropropane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
2-Chloroethyl vinyl ether	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
2-Hexanone	8901100 06A	8901100 11A	10.0	ND	10.0	ND	ND	NC	NC
4-Methyl-2-pentanone	8901100 06A	8901100 11A	3.6	<5X	410		207	287	139
Acetone	8901100 06A	8901100 11A	230		280		255	35.4	13.9
Acrolein	8901100 06A	8901100 11A	100	ND	100	ND	ND	NC	NC
Acrylonitrile	8901100 06A	8901100 11A	25.0	ND	25.0	ND	ND	NC	NC
Benzene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Bromoform	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Bromomethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Carbon Disulfide	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Carbon Tetrachloride	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Chlorobenzene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Chlorodibromomethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Chloroethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Chloroform	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Chloromethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Dibromomethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Dichlorobromomethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Dichlorodifluoromethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Ethyl benzene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Ethyl methacrylate	8901100 06A	8901100 11A	50.0	ND	50.0	ND	ND	NC	NC
Iodomethane	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Methylene chloride	8901100 06A	8901100 11A	19.0	<5X	5.0	ND	12.0	9.9	82.5
Styrene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Tetrachloroethylene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Toluene	8901100 06A	8901100 11A	1.0	ND	126		63.5	88.4	139

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A 2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Trichloroethene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Trichlorofluoromethane	8901100 06A	8901100 11A	10.0	ND	10.0	ND	ND	NC	NC
Vinyl Acetate	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Vinyl chloride	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Xylenes	8901100 06A	8901100 11A	1.0	ND	14.0		7.5	9.2	123
cis-1,3-Dichloropropene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
trans-1,2-Dichloroethene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
trans-1,3-Dichloropropene	8901100 06A	8901100 11A	2.0	ND	2.0	ND	ND	NC	NC
Semivolatile Organics									
Field duplicate									
1,2,4,5-Tetrachlorobenzene	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
1,2,4-Trichlorobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
1,2-Dichlorobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.1 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
1,2-Diphenylhydrazine	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
1,3-Dichlorobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
1,3-Dinitrobenzene	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
1,4-Dichlorobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
1-Chloronaphthalene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
1-Naphthylamine	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
2,3,4,6-Tetrachlorophenol	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
2,4,5-Trichlorophenol	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
2,4,6-Trichlorophenol	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
2,4-Dichlorophenol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2,4-Dimethylphenol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2,4-Dinitrophenol	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
2,4-Dinitrotoluene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
2,4-Dichlorophenol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2,4-Dinitrotoluene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2-Chloronaphthalene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2-Chlorophenol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2-Methylnaphthalene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
2-Naphthylamine	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
2-Nitroaniline	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
2-Nitrophenol	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
2-Picoline	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
3,3'-Dichlorobenzidene	8901083 06B	8901083 07B	20.0	ND	20.0	ND	ND	NC	NC
3-Methylcholanthrene	8901083 06B	8901083 07B	20.0	ND	20.0	ND	ND	NC	NC
3-Nitroaniline	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
4-Aminobiphenyl	8901083 06B	8901083 07B	250	ND	250	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.7 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	I CV
4-Bromophenyl phenyl ether	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
4-Chloro 3 methylphenol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
4-Nitroaniline	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
4-Nitrophenol	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
5-Nitro-o toluidine	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
Acenaphthene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Acenaphthylene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Acetophenone	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Aniline	8901083 06B	8901083 07B	20.0	ND	20.0	ND	ND	NC	NC
Anthracene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Benzidine	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(a)anthracene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(a)pyrene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A 2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Benzo(b)fluoranthene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(k)fluoranthene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Benzoic acid	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Benzyl alcohol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Butyl benzyl phthalate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Chlorobenzilate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Chrysene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Di-n-butylphthalate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Di-n-octylphthalate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Dibenz(a,j)acridine	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Dibenzo(a,h)anthracene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Dibenzofuran	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Diethylphthalate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A 2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Dimethylphthalate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Diphenylamine	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Ethyl methanesulfonate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Fluoranthene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Fluorene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Hexachlorobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Hexachlorobutadiene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Hexachlorocyclopentadiene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Hexachloroethane	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Isophorone	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Methyl methanesulfonate	8901083 06B	8901083 07B	20.0	ND	20.0	ND	ND	NC	NC
N-Nitrosodi-n-butylamine	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
N-Nitrosodimethylamine	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
N-Nitrosodiphenylamine	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
N-Nitrosodipropylamine	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
N-Nitrosopiperidine	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
Naphthalene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Nitrobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Pentachlorobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Pentachloronitrobenzene	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
Pentachlorophenol	8901083 06B	8901083 07B	50.0	ND	50.0	ND	ND	NC	NC
Phenacetin	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
Phenanthrene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Phenol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
Pronamide	8901083 06B	8901083 07B	100	ND	100	ND	ND	NC	NC
Pyrene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
a,a-Dimethylphenethylamine	8901083 06B	8901083 07B	25.0	ND	25.0	ND	ND	NC	NC
bis(2-Chloroethoxy)methane	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
bis(2-Chloroethyl)ether	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
bis(2-Ethylhexyl)phthalate	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
o-Cresol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
p-Chloroaniline	8901083 06B	8901083 07B	20.0	ND	20.0	ND	ND	NC	NC
p-Cresol	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
p-Dimethylaminoazobenzene	8901083 06B	8901083 07B	10.0	ND	10.0	ND	ND	NC	NC
9040									
field duplicate									
pH	T205 SWL	T205D SWL	4.6		4.7		4.6	0.042	0.92
Metals, Cold Vapor									
field duplicate									
Mercury	8901083 06E	8901083 07E	0.00020	ND	0.0020	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
matrix duplicate									
Mercury	89-01-099 01	89-01-099 02	95.0		90.0		92.5	3.5	3.8
Predigestion									
Mercury	89-01-081 01	89-01-083 01a	0.00020	ND	0.00020	ND	ND	NC	NC
D-1498									
field duplicate									
Eh	T205 SWL	T205D SWL	273		274		274	0.71	0.26
Metals, Graphite Furnace									
field duplicate									
Arsenic, graphite AA	8901083 06E	8901083 07E	0.0060	<5X	0.0070	<5X	0.0065	0.00071	10.9
Selenium, graphite AA	8901083 06E	8901083 07E	0.0050	ND	0.0050	ND	ND	NC	NC
Thallium, graphite AA	8901083 06E	8901083 07E	0.0010	ND	0.0010	ND	ND	NC	NC
matrix duplicate									
Arsenic, graphite AA	8901099 01B	8901099 02B	80.0		140		110	42.4	38.6
Lead, graphite AA	89-03-258 01	89-03-258 01a	100		0		50.0	70.7	141
Selenium, graphite AA	89-03-258 01	89-03-258 01a	28.0		48.0		38.0	14.1	37.2

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Selenium, graphite AA	8901099 01B	8901099 02B	0		0		0	0	
Thallium, graphite AA	89-03-258 01	89-03-258 01a	44.0		82.0		63.0	26.9	42.7
Thallium, graphite AA	8901099 01B	8901099 02B	0		0		0	0	
Predigestion									
Arsenic, graphite AA	8901083 01	8901083 01a	0.19		0.19		0.19	0	0
Selenium, graphite AA	8901083 01	8901083 01a	0.0050	ND	0.0050	ND	ND	NC	NC
Thallium, graphite AA	8901083 01	8901083 01a	0.0010	ND	0.0010	ND	ND	NC	NC
Infrared Methods									
field duplicate									
Oil and grease, infrared	8901083 06C	8901083 07C	0.80	<5X	0.25	ND	0.53	0.39	74.1
Predigestion									
Oil and grease, infrared	89-01-083 01	89-01-083 01a	2.5	<5X	2.2	<5X	2.4	0.21	9.0
Filterable Residue (TDS)									
field duplicate									
Filterable Residue (TDS)	8901083 06D	8901083 07D	4500		4400		4450	70.7	1.6
Predigestion									

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.2 DUPLICATE RESULTS FOR PRETREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Filterable Residue (TDS)	89-01-083 01	89-01-083 01a	6000	6200	6100	141	2.3

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.3 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	8901047 05B	8901047 06B	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8901047 05B	8901047 06B	0.20	ND	0.20	ND	ND	NC	NC
Barium, ICPES	8901047 05B	8901047 06B	0.18		0.22		0.20	0.028	14.1
Beryllium, ICPES	8901047 05B	8901047 06B	0.0020	ND	0.0020	ND	ND	NC	NC
Cadmium, ICPES	8901047 05B	8901047 06B	0.0025	ND	0.0060	<5X	0.0043	0.0025	58.2
Calcium, ICPES	8901047 05B	8901047 06B	4.5	<5X	4.6	<5X	4.6	0.071	1.6
Chromium, ICPES	8903181 13A	8903181 14A	0.030	ND	0.030	ND	ND	NC	NC
Copper, ICPES	8901047 05B	8901047 06B	0.020	ND	0.020	ND	ND	NC	NC
Lead, ICPES	8901047 05B	8901047 06B	0.28		0.29		0.29	0.0071	2.5
Nickel, ICPES	8901047 05B	8901047 06B	0.020	ND	0.020	ND	ND	NC	NC
Silver, ICPES	8901047 05B	8901047 06B	0.030	ND	0.030	ND	ND	NC	NC
Sodium, ICPES	8901047 05B	8901047 06B	1.5	<5X	1.4	<5X	1.5	0.071	4.9

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.3 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Zinc, ICPES	8901047 05B	8901047 06B	0.023	<5X	0.029	<5X	0.026	0.0042	16.3
PCBs									
field duplicate									
PCB-1016	8901047 05D	8901047 06D	0.42	ND	0.42	ND	ND	NC	NC
PCB-1221	8901047 05D	8901047 06D	0.42	ND	0.42	ND	ND	NC	NC
PCB-1232	8901047 05D	8901047 06D	0.85	ND	0.85	ND	ND	NC	NC
PCB-1242	8901047 05D	8901047 06D	0.42	ND	0.42	ND	ND	NC	NC
PCB-1248	8901047 05D	8901047 06D	0.42	ND	0.42	ND	ND	NC	NC
PCB-1254	8901047 05D	8901047 06D	0.85	ND	0.85	ND	ND	NC	NC
PCB-1260	8901047 05D	8901047 06D	0.85	ND	0.85	ND	ND	NC	NC
9040									
field duplicate									
pH	E205 SWL	E205D SWL	3.8		3.9		3.8	0.13	3.3

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.3 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, Cold Vapor									
field duplicate									
Mercury	8901047 05B	8901047 06B	0.00020	ND	0.0020	ND	ND	NC	NC
matrix duplicate									
Mercury	89-01-047 02	89-01-047 02a	84.0		84.0		84.0	0	0
D-1498									
field duplicate									
Eh	E205 SWL	E205D SWL	344		328		336	11.3	3.4
Metals, Graphite Furnace									
Analytical									
Arsenic, graphite AA	8902310 17	8902310 17a	0.79		0.74		0.77	0.035	4.6
field duplicate									
Arsenic, graphite AA	8901047 05B	8901047 06B	0.0080	<5X	0.0070	<5X	0.0075	0.00071	9.4
Lead, graphite AA	8902310 15A	8902310 16A	0.30		0.26		0.28	0.028	10.1
Selenium, graphite AA	8901047 05B	8901047 06B	0.0040	ND	0.0040	ND	ND	NC	NC
Thallium, graphite AA	8901047 05B	8901047 06B	0.0010	ND	0.0010	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.3 DUPLICATE RESULTS FOR PRETREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
matrix duplicate									
Arsenic, graphite AA	89-02-310 17	89-02-310 17a	0.79		0.74		0.77	0.035	4.6
Infrared Methods									
field duplicate									
Oil and grease, infrared	8901047 05C	8901047 06C	0.40	ND	0.40	ND	ND	NC	NC
Predigestion									
Oil and grease, infrared	89-01-047 01	89-01-047 01a	7.5		7.4		7.5	0.071	0.95
Filterable Residue (TDS)									
field duplicate									
Filterable Residue (TDS)	8901047 05A	8901047 06A	70.0		85.0		77.5	10.6	13.7
Predigestion									
Filterable Residue (TDS)	89-01-047 01	89-01-047 01a	1330		1340		1335	7.1	0.53
Filterable Residue (TDS)	89-01-047 10	89-01-047 10a	20.0	<5X	20.0	<5X	20.0	0	0

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	89-01-152 03	89-01-152 04	0.20	ND	0.20	ND	ND	NC	NC
Aluminum, ICPES	8901106 02	8901152 01	0.90	<5X	0.80	<5X	0.85	0.071	8.3
Aluminum, ICPES	8901106 03	8901152 02	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8901106 03	8901152 02	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	89-01-152 03	89-01-152 04	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8901106 02	8901152 01	0.20	ND	0.20	ND	ND	NC	NC
Barium, ICPES	8901106 03	8901152 02	0.26		0.23		0.25	0.021	8.7
Barium, ICPES	89-01-152 03	89-01-152 04	0.38		0.40		0.39	0.014	3.6
Barium, ICPES	8901106 02	8901152 01	0.095		0.098		0.097	0.0021	2.2
Beryllium, ICPES	8901106 02	8901152 01	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8901106 03	8901152 02	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	89-01-152 03	89-01-152 04	0.0020	ND	0.0020	ND	ND	NC	NC
Cadmium, ICPES	8901106 03	8901152 02	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8901106 02	8901152 01	0.0025	ND	0.0070	<5X	0.0048	0.0032	67.0
Cadmium, ICPES	89-01-152 03	89-01-152 04	0.0050	ND	0.0050	ND	ND	NC	NC
Calcium, ICPES	8901106 02	8901152 01	26.0	ND	15.0	ND	ND	NC	NC
Calcium, ICPES	8901106 03	8901152 02	5.9		4.1		5.0	1.3	25.5
Calcium, ICPES	89-01-152 03	89-01-152 04	1.1	<5X	1.1	<5X	1.1	0	0

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Chromium, ICPES	89-03-181 40	89-03-181 42	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	89-03-182 02	89-03-182 03	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	89-03-181 41	89-03-182 01	0.030	ND	0.030	ND	ND	NC	NC
Copper, ICPES	89-01-152 03	89-01-152 04	0.020	ND	0.020	ND	ND	NC	NC
Copper, ICPES	8901106 03	8901152 02	0.030	<5X	0.010	ND	0.020	0.014	70.7
Copper, ICPES	8901106 02	8901152 01	0.010	ND	0.040	<5X	0.025	0.021	84.9
Lead, ICPES	89-01-152 03	89-01-152 04	0.23	ND	0.23	ND	ND	NC	NC
Lead, ICPES	8901106 02	8901152 01	0.55		0.11		0.33	0.31	94.3
Lead, ICPES	8901106 03	8901152 02	0.50		0.26		0.38	0.17	44.7
Nickel, ICPES	89-01-152 03	89-01-152 04	0.020	ND	0.020	ND	ND	NC	NC
Nickel, ICPES	8901106 02	8901152 01	0.050	<5X	0.010	ND	0.030	0.028	94.3
Nickel, ICPES	8901106 03	8901152 02	0.020	<5X	0.020	<5X	0.020	0	0
Silver, ICPES	8901106 02	8901152 01	0.030	ND	0.030	ND	ND	NC	NC
Silver, ICPES	8901106 03	8901152 02	0.030	ND	0.030	ND	ND	NC	NC
Silver, ICPES	89-01-152 03	89-01-152 04	0.030	ND	0.030	ND	ND	NC	NC
Sodium, ICPES	8901106 03	8901152 02	1.0	ND	1.0	ND	ND	NC	NC
Sodium, ICPES	8901106 02	8901152 01	2.0	<5X	0.50	ND	1.3	1.1	84.9
Sodium, ICPES	89-01-152 03	89-01-152 04	1.0	ND	1.0	ND	ND	NC	NC
Zinc, ICPES	89-01-152 03	89-01-152 04	0.020	ND	0.020	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Zinc, ICPES	8901106 02	8901152 01	0.070	<5X	0.035	<5X	0.053	0.025	47.1
Zinc, ICPES	8901106 03	8901152 02	0.020	ND	0.020	ND	ND	NC	NC
matrix duplicate									
Aluminum, ICPES	8901152 05B	8901152 06B	77.0		78.0		77.5	0.71	0.91
Aluminum, ICPES	89-03-254 09	89-03-254 09a	89.3		89.2		89.3	0.071	0.079
Antimony, ICPES	8901152 05B	8901152 06B	86.0		84.0		85.0	1.4	1.7
Antimony, ICPES	89-03-254 09	89-03-254 09a	87.7		92.5		90.1	3.4	3.8
Barium, ICPES	89-03-254 09	89-03-254 09a	88.6		88.6		88.6	0	0
Barium, ICPES	8901152 05B	8901152 06B	82.0		82.0		82.0	0	0
Beryllium, ICPES	89-03-254 09	89-03-254 09a	89.8		89.9		89.9	0.071	0.079
Beryllium, ICPES	8901152 05B	8901152 06B	84.0		84.0		84.0	0	0
Cadmium, ICPES	89-03-254 09	89-03-254 09a	85.7		85.6		85.7	0.071	0.083
Cadmium, ICPES	8901152 05B	8901152 06B	79.0		80.0		79.5	0.71	0.89
Calcium, ICPES	89-03-254 09	89-03-254 09a	91.6		92.6		92.1	0.71	0.77
Calcium, ICPES	8901152 05B	8901152 06B	86.0		88.0		87.0	1.4	1.6
Chromium, ICPES	89-03-182 04	89-03-181 05	82.0		82.0		82.0	0	0
Chromium, ICPES	89-03-254 09	89-03-254 09a	88.0		88.0		88.0	0	0
Copper, ICPES	89-03-254 09	89-03-254 09a	87.6		88.1		87.9	0.35	0.40

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Copper, ICPES	8901152 05B	8901152 06B	77.0		78.0		77.5	0.71	0.91
Lead, ICPES	8901152 05B	8901152 06B	65.0		68.0		66.5	2.1	3.2
Nickel, ICPES	89-03-254 09	89-03-254 09a	88.3		89.5		88.9	0.85	0.95
Nickel, ICPES	8901152 05B	8901152 06B	82.0		84.0		83.0	1.4	1.7
Silver, ICPES	8901152 05B	8901152 06B	76.0		75.0		75.5	0.71	0.94
Silver, ICPES	89-03-254 09	89-03-254 09a	87.6		85.5		86.6	1.5	1.7
Sodium, ICPES	89-03-254 09	89-03-254 09a	87.0		92.1		89.6	3.6	4.0
Sodium, ICPES	8901152 05B	8901152 06B	77.0		86.0		81.5	6.4	7.8
Zinc, ICPES	89-03-254 09	89-03-254 09a	86.8		87.3		87.1	0.35	0.41
Zinc, ICPES	8901152 05B	8901152 06B	80.0		81.0		80.5	0.71	0.88
PCBs									
Analytical									
PCB-1016	8901105 01A	8901105 01F	1.0	ND	1.0	ND	ND	NC	NC
PCB-1016	8901046 01D	8901046 01F	1.1	ND	1.1	ND	ND	NC	NC
PCB-1016	8901106 01A	8901106 01G	0.42	ND	0.42	ND	ND	NC	NC
PCB-1016	8901157 03A	8901157 03G	0.41	ND	0.41	ND	ND	NC	NC
PCB-1221	8901106 01A	8901106 01G	0.42	ND	0.42	ND	ND	NC	NC
PCB-1221	8901046 01D	8901046 01F	1.1	ND	1.1	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1221	8901157 03A	8901157 03G	0.82	ND	0.82	ND	ND	NC	NC
PCB-1221	8901105 01A	8901105 01F	1.0	ND	1.0	ND	ND	NC	NC
PCB-1232	8901046 01D	8901046 01F	2.3	ND	2.3	ND	ND	NC	NC
PCB-1232	8901105 01A	8901105 01F	2.0	ND	2.0	ND	ND	NC	NC
PCB-1232	8901157 03A	8901157 03G	0.82	ND	0.82	ND	ND	NC	NC
PCB-1232	8901106 01A	8901106 01G	0.84	ND	0.84	ND	ND	NC	NC
PCB-1242	8901046 01D	8901046 01F	1.1	ND	1.1	ND	ND	NC	NC
PCB-1242	8901105 01A	8901105 01F	1.0	ND	1.0	ND	ND	NC	NC
PCB-1242	8901157 03A	8901157 03G	0.41	ND	0.41	ND	ND	NC	NC
PCB-1242	8901106 01A	8901106 01G	0.42	ND	0.42	ND	ND	NC	NC
PCB-1248	8901105 01A	8901105 01F	1.0	ND	1.0	ND	ND	NC	NC
PCB-1248	8901046 01D	8901046 01F	1.1	ND	1.1	ND	ND	NC	NC
PCB-1248	8901106 01A	8901106 01G	0.42	ND	0.42	ND	ND	NC	NC
PCB-1248	8901157 03A	8901157 03G	0.41	ND	0.41	ND	ND	NC	NC
PCB-1254	8901046 01D	8901046 01F	2.3	ND	2.3	ND	ND	NC	NC
PCB-1254	8901106 01A	8901106 01G	0.84	ND	0.84	ND	ND	NC	NC
PCB-1254	8901157 03A	8901157 03G	0.82	ND	0.82	ND	ND	NC	NC
PCB-1254	8901105 01A	8901105 01F	2.0	ND	2.0	ND	ND	NC	NC
PCB-1260	8901157 03A	8901157 03G	0.82	ND	0.82	ND	ND	NC	NC
PCB-1260	8901105 01A	8901105 01F	2.0	ND	2.0	ND	ND	NC	NC
PCB-1260	8901106 01A	8901106 01G	0.84	ND	0.84	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1260	8901046 01D	8901046 01F	2.3	ND	2.3	ND	ND	NC	NC
field duplicate									
PCB-1016	8901152 03A	8901152 04A	0.10	ND	0.11	ND	ND	NC	NC
PCB-1016	8901106 02A	8901152 01G	0.42	ND	0.41	ND	ND	NC	NC
PCB-1016	8901106 03A	8901152 02A	0.21	ND	0.21	ND	ND	NC	NC
PCB-1221	8901106 02A	8901152 01G	0.42	ND	0.82	ND	ND	NC	NC
PCB-1221	8901106 03A	8901152 02A	0.21	ND	0.42	ND	ND	NC	NC
PCB-1221	8901152 03A	8901152 04A	0.20	ND	0.22	ND	ND	NC	NC
PCB-1232	8901152 03A	8901152 04A	0.20	ND	0.22	ND	ND	NC	NC
PCB-1232	8901106 02A	8901152 01G	0.84	ND	0.82	ND	ND	NC	NC
PCB-1232	8901106 03A	8901152 02A	0.42	ND	0.42	ND	ND	NC	NC
PCB-1242	8901106 02A	8901152 01G	0.42	ND	0.41	ND	ND	NC	NC
PCB-1242	8901106 03A	8901152 02A	0.21	ND	0.21	ND	ND	NC	NC
PCB-1242	8901152 03A	8901152 04A	0.10	ND	0.11	ND	ND	NC	NC
PCB-1248	8901152 03A	8901152 04A	0.10	ND	0.11	ND	ND	NC	NC
PCB-1248	8901106 02A	8901152 01G	0.42	ND	0.41	ND	ND	NC	NC
PCB-1248	8901106 03A	8901152 02A	0.21	ND	0.21	ND	ND	NC	NC
PCB-1254	8901152 03A	8901152 04A	0.20	ND	0.22	ND	ND	NC	NC
PCB-1254	8901106 03A	8901152 02A	0.42	ND	0.42	ND	ND	NC	NC
PCB-1254	8901106 02A	8901152 01G	0.84	ND	0.82	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1260	8901106 02A	8901152 01G	0.84	ND	0.82	ND	ND	NC	NC
PCB-1260	8901152 03A	8901152 04A	0.20	ND	0.22	ND	ND	NC	NC
PCB-1260	8901106 03A	8901152 02A	0.42	ND	0.42	ND	ND	NC	NC
matrix duplicate									
2,4,5,6-Tetrachlorometaxylene	8901152 05A	8901152 06A	84.0		78.0		81.0	4.2	5.2
Dibutylchloroendate	8901152 05A	8901152 06A	76.0		71.0		73.5	3.5	4.8
PCB 1254	8901152 05A	8901152 06A	94.0		95.0		94.5	0.71	0.75
9040									
field duplicate									
pH	8205-100 SWL	8205D-100 SWL	3.8		3.9		3.8	0.035	0.92
pH	8205-20 SWL	8205D-20 SWL	3.7		3.5		3.6	0.085	2.4
pH	8205-4 SWL	8205D-4 SWL	3.3		3.3		3.3	0	0
Metals, Cold Vapor									
field duplicate									
Mercury	89-01-106-03	89-01-152-02	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	89-01-106-02	89-01-152-01	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	89-01-152-03	89-01-152-04	0.00020	ND	0.00020	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
matrix duplicate									
Mercury	89-01-152 05	89-01-152 06	90.0		100		95.0	7.1	7.4
Predigestion									
Mercury	89-01-046 01	89-01-046 01a	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	89-01-157 01	89-01-157 01a	0.00020	ND	0.00020	ND	ND	NC	NC
D-1498									
field duplicate									
Eh	B205-100 SWL	B205D-100 SWL	304		279		292	17.7	6.1
Eh	B205-20 SWL	B205D-20 SWL	305		273		289	22.6	7.8
Eh	B205-4 SWL	B205D-4 SWL	293		290		292	2.1	0.73
Metals, Graphite Furnace									
field duplicate									
Arsenic, graphite AA	8901106 02	8901152 01	0.028		0.026		0.027	0.0014	5.2
Arsenic, graphite AA	8901106 03	8901152 02	0.010		0.0060	<5X	0.0080	0.0028	35.4
Arsenic, graphite AA	8901152 03	8901152 04	0.0030	<5X	0.0020	<5X	0.0025	0.00071	28.3
Selenium, graphite AA	8901152 03	8901152 04	0.0050	ND	0.0050	ND	ND	NC	NC
Selenium, graphite AA	8901106 02	8901152 01	0.0050	ND	0.0050	ND	ND	NC	NC
Selenium, graphite AA	8901106 03	8901152 02	0.0050	ND	0.0050	ND	ND	NC	NC
Thallium, graphite AA	8901106 02	8901152 01	0.0020	ND	0.0020	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Thallium, graphite AA	8901152 03	8901152 04	0.0020	<5X	0.0010	ND	0.0015	0.00071	47.1
Thallium, graphite AA	8901106 03	8901152 02	0.0020	ND	0.0020	ND	ND	NC	NC
matrix duplicate									
Arsenic, graphite AA	8901152 05B	8901152 06B	88.0		92.0		90.0	2.8	3.1
Lead, graphite AA	89-03-254 09	89-03-254 09a	0		0		0	0	
Selenium, graphite AA	8901152 05B	8901152 06B	86.0		86.0		86.0	0	0
Thallium, graphite AA	8901152 05B	8901152 06B	80.0		84.0		82.0	2.8	3.4
Predigestion									
Arsenic, graphite AA	8901046 02	8901046 02	0.23		0.21		0.22	0.014	6.4
Selenium, graphite AA	8901046 02	8901046 02	0.0040	ND	0.0040	ND	ND	NC	NC
Thallium, graphite AA	8901046 02	8901046 02	0.0010	ND	0.0010	ND	ND	NC	NC
Infrared Methods									
field duplicate									
Oil and grease, infrared	8901152 03	8901152 04	0.40	ND	0.40	ND	ND	NC	NC
Oil and grease, infrared	8901106 02	8901152 01	0.50	ND	0.40	ND	ND	NC	NC
Oil and grease, infrared	8901106 03	8901152 02	0.40	ND	0.40	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Total organic carbon	89-01-152 03	89-01-152 04	13.0	10.0	11.5	2.1	18.4
Total organic carbon	89-01-106 03	89-01-152 02	18.0	22.0	20.0	2.8	14.1
Total organic carbon	89-01-106 02	89-01-152 01	61.0	150	106	62.9	59.7
Total organic carbon	89-01-106 03	89-01-152 02	0.40 ND	0.50 ND	ND	NC	NC
matrix duplicate							
Total organic carbon	89-01-046 01	89-01-046 01a	112	112	112	0	0
Total organic carbon	89-01-157 05b	89-01-157 05c	100	100	100	0	0
Total organic carbon	89-01-157 01	89-01-157 01a	92.0	96.0	94.0	2.8	3.0
Total organic carbon	89-01-105 04	89-01-105 04a	92.0	100	96.0	5.7	5.9
Total organic carbon	89-01-105 08	89-01-105 08a	88.0	88.0	88.0	0	0
Predigestion							
Oil and grease, infrared	89-01-046 04	89-01-046 04a	10.0	8.0	9.0	1.4	15.7
Oil and grease, infrared	89-01-105 01	89-01-105 01a	5.0	5.0	5.0	0	0
Oil and grease, infrared	89-01-152 08	89-01-152 08a	2.2	2.0	2.1	0.14	6.7
Oil and grease, infrared	89-01-157 05	89-01-157 05a	3.1	3.4	3.3	0.21	6.5
Total organic carbon	89-01-105 04	89-01-105 04a	190	170	180	14.1	7.9
Total organic carbon	89-01-105 02	89-01-105 02a	62.0	60.0	61.0	1.4	2.3
Total organic carbon	89-01-152 08	89-01-152 08a	64.0	61.0	62.5	2.1	3.4
Total organic carbon	89-01-046 01	89-01-046 01a	190	190	190	0	0
Filterable Residue (TDS)							
field duplicate							

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 4 DUPLICATE RESULTS FOR PRETREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Pretreatment, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Filterable Residue (TDS)	89-01-152 03	89-01-152 04	40.0	30.0	35.0	7.1	20.2
Filterable Residue (TDS)	89-01-106 02	89-01-152 01	430	440	435	7.1	1.6
Filterable Residue (TDS)	89-01-106 03	89-01-152 02	100	130	115	21.2	18.4
Predigestion							
Filterable Residue (TDS)	89-01-105 01	89-01-105 01a	1100	1100	1100	0	0
Filterable Residue (TDS)	89-01-105 04	89-01-105 04a	670	690	680	14.1	2.1
Filterable Residue (TDS)	89-01-157 01	89-01-157 01a	100	98.0	99.0	1.4	1.4
Filterable Residue (TDS)	89-01-046 01	89-01-046 01a	1010	890	950	84.9	8.9

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Metals, ICPES							
matrix duplicate							
Aluminum, ICPES	8902310 04	8902310 04a	108	108	108	0.071	0.066
Aluminum, ICPES	8901178 13A	8901178 14A	10.0	10.0	10.0	0	0
Antimony, ICPES	8901178 13A	8901178 14A	0	0	0	0	
Arsenic, ICPES	8901178 13A	8901178 14A	76.0	76.0	76.0	0	0
Barium, ICPES	8901178 13A	8901178 14A	78.0	78.0	78.0	0	0
Beryllium, ICPES	8901178 13A	8901178 14A	86.0	78.0	82.0	5.7	6.9
Cadmium, ICPES	8902310 04	8902310 04a	86.7	88.4	87.6	1.2	1.4
Cadmium, ICPES	8901178 13A	8901178 14A	71.0	64.0	67.5	4.9	7.3
Chromium, ICPES	8902310 04	8902310 04a	80.9	81.2	81.1	0.21	0.26
Chromium, ICPES	8901178 13A	8901178 14A	41.0	60.0	50.5	13.4	26.6
Copper, ICPES	8901178 13A	8901178 14A	61.0	80.0	70.5	13.4	19.1
Copper, ICPES	8902310 04	8902310 04a	91.3	91.7	91.5	0.28	0.31
Lead, ICPES	8902310 04	8902310 04a	115	114	114	0.85	0.74
Lead, ICPES	8901178 13A	8901178 14A	67.0	70.0	68.5	2.1	3.1

NC: Not Calculable.

ND: Not Detected.

C: Not able to reucover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis.

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ATTACHMENT A 5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Nickel, ICPES	8902310 04	8902310 04a	71.1		71.9		71.5	0.57	0.79
Nickel, ICPES	89-01-178 13	89-01-178 15	42.0		80.0		61.0	26.9	44.0
Selenium, ICPES	8901178 13A	8901178 14A	76.0		76.0		76.0	0	0
Silver, ICPES	8901178 13A	8901178 14A	88.0		84.0		85.0	1.4	1.7
Silver, ICPES	8902310 04	8902310 04a	81.5		82.8		82.2	0.92	1.1
Sodium, ICPES	8901178 13A	8901178 14A	75.0		80.0		77.5	3.5	4.6
Thallium, ICPES	8901178 13A	8901178 14A	82.0		80.0		81.0	1.4	1.7
Zinc, ICPES	8902310 04	8902310 04a	76.3		77.3		76.8	0.71	0.92
Zinc, ICPES	8901178 13A	8901178 14A	67.0		66.0		66.5	0.71	1.1
Predigestion									
Calcium, ICPES	8901178 08	8901178 06a	153000		150000		151500	2121	1.4
PCBs									
Analytical									
PCB-1016	8901170 01B	8901170 01C	670	ND	670	ND	ND	NC	NC
PCB-1016	8901170 05B	8901170 05D	670	ND	670	ND	ND	NC	NC
PCB-1221	8901170 05B	8901170 05D	1300	ND	1300	ND	ND	NC	NC
PCB-1221	8901170 01B	8901170 01C	1300	ND	1300	ND	ND	NC	NC

NC: Not Calculable

ND: Not Detected.

C: Not able to rewcover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis.

369

ATTACHMENT A 5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1232	8901170 05B	8901170 05D	1300	ND	1300	ND	ND	NC	NC
PCB-1232	8901170 01B	8901170 01C	1300	ND	1300	ND	ND	NC	NC
PCB-1242	8901170 01B	8901170 01C	6200		6700		6450	354	5.5
PCB-1242	8901170 05B	8901170 05D	24000		24000		24000	0	0
PCB-1248	8901170 01B	8901170 01C	670	ND	670	ND	ND	NC	NC
PCB-1248	8901170 05B	8901170 05D	670	ND	670	ND	ND	NC	NC
PCB-1254	8901170 01B	8901170 01C	1300	ND	1300	ND	ND	NC	NC
PCB-1254	8901170 05B	8901170 05D	1300	ND	1300	ND	ND	NC	NC
PCB-1260	8901170 01B	8901170 01C	9100		9200		9150	70.7	0.77
PCB-1260	8901170 05B	8901170 05D	5600		5300		5450	212	3.9
matrix duplicate									
2,4,5,6-Tetrachlorometaxylene	8901170 06D	8901170 06E	98.0		110		104	8.5	8.2
2,4,5,6-Tetrachlorometaxylene	8902186 01B	8901170 06E	90.0		110		100	14.1	14.1
Dibutylchloroendate	8902186 01B	8901170 06E		C		C	0	0	
Dibutylchloroendate	8901170 06D	8901170 06E		C		C	0	0	
PCB-1254	8901170 06D	8901170 06E		D		D	0	0	
PCB-1260	8902186 01B	8902186 01C	89.0		101		95.0	8.5	8.9

NC: Not Calculable.

ND: Not Detected.

C: Not able to reucover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis

370

ATTACHMENT A.5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Volatile Organics, Matrix Spike							
matrix duplicate							
1,1-Dichloroethene	8901170 03D	8901170 03E	74.0	75.0	74.5	0.71	0.95
1,2-Dichloroethane-d4	8901170 03D	8901170 03E	98.0	98.0	98.0	0	0
Benzene	8901170 03D	8901170 03E	76.0	74.0	75.0	1.4	1.9
Chlorobenzene	8901170 03D	8901170 03E	105	100	103	3.5	3.4
Toluene	8901170 03D	8901170 03E	74.0	52.0	63.0	15.6	24.7
Toluene-d8	8901170 03D	8901170 03E	89.0	87.0	88.0	1.4	1.6
Trichloroethene	8901170 03D	8901170 03E	94.0	86.0	90.0	5.7	6.3
p-Bromofluorobenzene	8901170 03D	8901170 03E	76.0	76.0	76.0	0	0
Semivolatile Organics, Matrix Spike							
field duplicate							
1,2,4 Trichlorobenzene	8901170 16B	8901170 16C	110	93.0	102	12.0	11.8
1,4-Dichlorobenzene	8901170 16B	8901170 16C	88.0	73.0	80.5	10.6	13.2

NC: Not Calculable.

ND: Not Detected.

C: Not able to rewcover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis.

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ATTACHMENT A 5 DUPLICATE RESULTS FOR POST TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
2,4-Dinitrotoluene	8901170 16B	8901170 16C	87.0	68 0	77 5	13 4	17 3
2-Fluorobiphenyl	6901170 16B	8901170 16C	89.0	79 0	84 0	7.1	8 4
Acenaphthene	8901170 16B	8901170 16C	83.0	69 0	76 0	9 9	13 0
Di-n-propylnitrosamine	8901170 16B	8901170 16C	98 0	76 0	87 0	15 6	17 9
Nitrobenzene-d5	8901170 16B	8901170 16C	93.0	77 0	85 0	11 3	13 3
Phenol	8901170 16B	8901170 16C	7.0	7 0	7.0	0	0
Phenol-d5	8901170 16B	8901170 16C	8.2	8 8	8 5	0 42	5 0
Pyrene	8901170 16B	8901170 16C	64.0	61.0	62 5	2 1	3 4
Terphenyl-d14	8901170 16B	8901170 16C	102	64 0	83 0	26 9	32.4
p-Chloro m cresol	8901170 16B	8901170 16C	8 0	8 0	8 0	0	0
9040							
field duplicate							
pH	343 SWL	343D SWL	12.0	12 1	12 1	0 071	0 59

NC: Not Calculable.
ND: Not Detected.
C: Not able to rewcover due to silica gel cleanup.
D: Not able to recover due to dilution during analysis.

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ATTACHMENT A.5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
ASA-13-2							
field duplicate							
Bulk Density	143 SWL	142 SWL	1.6	1.6	1.6	0.028	1.8
Bulk Density	247 SWL	248 SWL	1.4	1.4	1.4	0.0071	0.50
Bulk Density	244 SWL	246 SWL	1.4	1.4	1.4	0.0071	0.49
Bulk Density	246 SWL	245 SWL	1.4	1.4	1.4	0.014	0.99
Bulk Density	241 SWL	243 SWL	1.4	1.4	1.4	0.0071	0.49
Bulk Density	241 SWL	242 SWL	1.4	1.5	1.4	0.021	1.5
Bulk Density	337 SWL	339 SWL	1.7	1.7	1.7	0.0071	0.42
Bulk Density	144 SWL	145 SWL	1.6	1.6	1.6	0.014	0.90
Bulk Density	337 SWL	338 SWL	1.7	1.7	1.7	0.014	0.85
Bulk Density	143 SWL	141 SWL	1.6	1.6	1.6	0.014	0.90
Bulk Density	340 SWL	342 SWL	1.7	1.7	1.7	0	0
Bulk Density	340 SWL	341 SWL	1.7	1.7	1.7	0	0
Bulk Density	343 SWL	345 SWL	1.7	1.7	1.7	0	0
Bulk Density	343 SWL	344 SWL	1.7	1.7	1.7	0	0
Bulk Density	247 SWL	249 SWL	1.4	1.4	1.4	0.014	0.99
Bulk Density	144 SWL	146 SWL	1.6	1.6	1.6	0.014	0.88
Bulk Density	147 SWL	148 SWL	1.6	1.6	1.6	0.0071	0.44
Bulk Density	147 SWL	149 SWL	1.6	1.6	1.6	0.014	0.88
Metals, Cold Vapor							
matrix duplicate							
Mercury	8901178 13A	8901178 14A	68.0	70.0	69.0	1.4	2.0

NC: Not Calculable

ND: Not Detected.

C: Not able to rewcover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis.

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ATTACHMENT A 5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Mercury	8902310 04	8902310 04a	77.5	79 4	78 5	1 3	1.7
Predigestion							
Mercury	89-01-178 01	89-01-178 01a	0.040 ND	0.040 ND	ND	NC	NC
D-1498							
field duplicate							
Eh	343 SWL	343D SWL	-51.0	-58 0	-54 5	4 9	-9 1
D-16-33							
field duplicate							
Unconfined Compressive Strength	248 SWL	249 SWL	348	312	330	25 5	7 7
Unconfined Compressive Strength	143 SWL	141 SWL	633	722	678	62.9	9 3
Unconfined Compressive Strength	143 SWL	142 SWL	633	609	621	17 0	2.7
Unconfined Compressive Strength	144 SWL	145 SWL	631	617	624	9 9	1 6
Unconfined Compressive Strength	144 SWL	146 SWL	631	605	618	18.4	3.0
Unconfined Compressive Strength	147 SWL	148 SWL	747	751	749	2 8	0.38
Unconfined Compressive Strength	147 SWL	149 SWL	747	787	767	28 3	3 7
Unconfined Compressive Strength	244 SWL	245 SWL	470	401	436	48 8	11 2
Unconfined Compressive Strength	244 SWL	246 SWL	470	324	397	103	26 0
Unconfined Compressive Strength	241 SWL	243 SWL	546	663	605	82 7	13 7
Unconfined Compressive Strength	241 SWL	242 SWL	546	311	429	166	38 8
Unconfined Compressive Strength	337 SWL	339 SWL	1070	797	934	193	20 7
Unconfined Compressive Strength	337 SWL	338 SWL	1070	859	965	149	15 5

NC: Not Calculable.

ND: Not Detected.

C: Not able to reucover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis

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ATTACHMENT A 5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Unconfined Compressive Strength	340 SWL	342 SWL	876	1020	948	102	10 7
Unconfined Compressive Strength	340 SWL	341 SWL	876	876	876	0	0
Unconfined Compressive Strength	343 SWL	345 SWL	787	768	778	13 4	1 7
Unconfined Compressive Strength	343 SWL	344 SWL	787	694	741	65 8	8 9
Unconfined Compressive Strength	247 SWL	248 SWL	150	348	249	140	56 2
D-2216							
field duplicate							
Water Content	241 SWL	243 SWL	23 3	22 2	22 8	0 78	3 4
Water Content	244 SWL	245 SWL	22.6	18 5	20 6	2 9	14 1
Water Content	241 SWL	242 SWL	23 3	22 2	22 8	0 78	3 4
Water Content	337 SWL	339 SWL	16 1	14 4	15 3	1 2	7 9
Water Content	337 SWL	338 SWL	16.1	14 3	15 2	1 3	8 4
Water Content	340 SWL	342 SWL	15.5	13 9	14 7	1 1	7 7
Water Content	340 SWL	341 SWL	15.5	11 9	13 7	2 5	18 6
Water Content	343 SWL	345 SWL	16.4	13 5	15 0	2 1	13 7
Water Content	343 SWL	344 SWL	16.4	15 8	16 1	0 42	2 6
Water Content	244 SWL	246 SWL	22.6	18 8	20 7	2.7	13 0
Water Content	247 SWL	248 SWL	21.1	21 [illegible]	21 1	0 092	0 44
Water Content	247 SWL	249 SWL	21.0	19 [illegible]	20 1	1 3	6 3
Water Content	147 SWL	148 SWL	10 4	9 5	9 9	0 64	6 4
Water Content	143 SWL	141 SWL	11.3	15 3	13 3	2 8	21 3
Water Content	147 SWL	149 SWL	10.4	9 3	9 9	0.78	7 9
Water Content	143 SWL	142 SWL	11.3	13 6	12 5	1 6	13 1
Water Content	144 SWL	145 SWL	14.3	13 8	14 1	0 35	2 5

NC: Not Calculable.

ND: Not Detected.

C: Not able to reucover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis.

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ATTACHMENT A 5 DUPLICATE RESULTS FOR POST-TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Water Content	144 SWL	146 SWL	14.3		15 7		15 0	0 99	6 6
D-2234									
field duplicate									
Permeability	261 SWL	266 SWL	0 00000		0 00000		0 00000	0 00000	9 8
Metals, Graphite Furnace									
matrix duplicate									
Arsenic, graphite AA	8901178 13A	8901178 14A	0	NC	0	NC	0	0	
Arsenic, graphite AA	8902310 04	8903210 04a	111		116		113	3 6	3 2
Selenium, graphite AA	8902310 04	8902310 04a	48.8		69 4		59 1	14 6	24 6
Selenium, graphite AA	8901178 13A	8901178 14A	0	NC	0	NC	0	0	
Thallium, graphite AA	8902310 04	8902310 04a	35.0		69 0		52 0	24 0	46 2
Thallium, graphite AA	8901178 13A	8901178 14A	48.0		44.0		46 0	2 8	6 1
Infrared Methods									
matrix duplicate									
Oil and grease, infrared	8901178 15A	8901178 16A	121		119		120	1 4	1 2
Predigestion									
Oil and grease, infrared	89-01-178 01a	89-01-178 01b	58700		58300		58500	283	0 48

NC: Not Calculable.

ND: Not Detected.

C: Not able to rewcover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis.

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ATTACHMENT A.5 DUPLICATE RESULTS FOR POST TREATMENT SOLIDS

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX =

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Oil and grease, infrared	89-01-178 01	89-01-178 01a	64500	58700	61600	4101	6.7
Oil and grease, infrared	89-01-178 03	89-01-178 03a	54200	69500	61850	10819	17.5
Oil and grease, infrared	89-01-178 03b	89-01-178 03c	194000	192000	193000	1414	0.73
LOI							
Predigestion							
Loss on ignition at 550C	89-01-178 09	89-01-178 09a	402000	402000	402000	0	0

NC: Not Calculable.

ND: Not Detected.

C: Not able to rewcover due to silica gel cleanup.

D: Not able to recover due to dilution during analysis

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	89-01-272 03	89-01-272 04	0.38	<5X	0.31	<5X	0.35	0.049	14.3
Antimony, ICPES	89-01-272 03	89-01-272 04	0.20	ND	0.20	ND	ND	NC	NC
Barium, ICPES	89-01-272 03	89-01-272 04	2.4		2.1		2.3	0.21	9.4
Beryllium, ICPES	89-01-272 03	89-01-272 04	0.0020	ND	0.0020	ND	ND	NC	NC
Cadmium, ICPES	89-01-272 03	89-01-272 04	0.0050	ND	0.0050	ND	ND	NC	NC
Chromium, ICPES	89-03-182 39	89-03-182 40	0.037	<5X	0.037	<5X	0.037	0	0
Copper, ICPES	89-01-272 03	89-01-272 04	0.068	<5X	0.026	<5X	0.047	0.030	63.2
Lead, ICPES	89-01-272 03	89-01-272 04	0.050	ND	0.050	ND	ND	NC	NC
Nickel, ICPES	89-01-272 03	89-01-272 04	0.020	ND	0.020	ND	ND	NC	NC
Silver, ICPES	89-01-272 03	89-01-272 04	0.030	ND	0.030	ND	ND	NC	NC
Sodium, ICPES	89-01-272 03	89-01-272 04	17.0		16.0		16.5	0.71	4.3
Zinc, ICPES	89-01-272 03	89-01-272 04	0.020	ND	0.020	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

378

ATTACHMENT A.6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
matrix duplicate							
Aluminum, ICPES	8902053 06A	8902053 07A	91.0	87.0	89.0	2.8	3.2
Aluminum, ICPES	89-03-254 35	89-03-254 35a	92.3	92.3	92.3	0	0
Aluminum, ICPES	89-01-272 08	89-01-272 09	84.0	87.0	85.5	2.1	2.5
Aluminum, ICPES	89-03-254 28	89-03-254 28a	89.5	90.6	90.1	0.78	0.86
Antimony, ICPES	89-03-254 35	89-03-254 35a	79.8	79.0	79.8	0	0
Antimony, ICPES	8902053 06A	8902053 07A	89.0	88.0	88.5	0.71	0.80
Antimony, ICPES	89-01-272 07	89-01-272 07a	78.0	82.0	80.0	2.8	3.5
Antimony, ICPES	89-03-254 28	89-03-254 28a	74.5	73.6	74.1	0.64	0.86
Barium, ICPES	89-03-254 35	89-03-254 35a	88.0	93.0	90.5	3.5	3.9
Barium, ICPES	89-03-254 28	89-03-254 28a	89.4	93.4	91.4	2.8	3.1
Barium, ICPES	8902053 06A	8902053 07A	90.0	80.0	85.0	7.1	8.3
Barium, ICPES	89-01-272 07	89-01-272 07a	83.0	93.0	88.0	7.1	8.0
Beryllium, ICPES	89-01-272 07	89-01-272 07a	86.0	88.0	87.0	1.4	1.6
Beryllium, ICPES	89-03-254 28	89-03-254 28a	82.6	84.2	83.4	1.1	1.4
Beryllium, ICPES	8902053 06A	8902053 07A	90.0	89.0	89.5	0.71	0.79
Beryllium, ICPES	89-03-254 35	89-03-254 35a	85.0	85.8	85.4	0.57	0.66
Cadmium, ICPES	89-03-254 35	89-03-254 35a	88.7	90.3	89.5	1.1	1.1
Cadmium, ICPES	8902053 06A	8902053 07A	81.0	80.0	80.5	0.71	0.88
Cadmium, ICPES	89-03-254 28	89-03-254 28a	86.5	85.9	86.2	0.42	0.49
Cadmium, ICPES	89-01-272 07	89-01-272 07a	77.0	80.0	78.5	2.1	2.7

NC: Not Calculable.
ND: Not Detected.

379

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Chromium, ICPES	89-03-183 02	89-03-183 03	80 0	83 0	81 5	2 1	2 6
Chromium, ICPES	89-03-254 35	89-03-254 35a	85.7	87 0	86 4	0 92	1 1
Chromium, ICPES	89-03-254 28	89-03-254 28a	81.9	82 1	82 0	0 14	0 17
Chromium, ICPES	89-03-183 25	89-03-181 26	84.0	83 0	83 5	0 71	0 85
Copper, ICPES	8902053 06A	8902053 07A	89 0	88 0	88 5	0 71	0 80
Copper, ICPES	89-03-254 35	89-03-254 35a	90.3	90 8	90 6	0 35	0 39
Copper, ICPES	89-01-272 07	89-01-272 07a	86.0	90 0	88 0	2 8	3 2
Copper, ICPES	89-03-254 28	89-03-254 28a	87.4	88 7	88 1	0 92	1 0
Lead, ICPES	89-03-254 35	89-03-254 35a	69.4	65 0	67 2	3 1	4 6
Lead, ICPES	8902053 06A	8902053 07A	78 0	79 0	78 5	0 71	0 90
Lead, ICPES	89-01-272 07	89-01-272 07a	76.0	79 0	77 5	2 1	2 7
Lead, ICPES	89 03-254 28	89-03-254 28a	67.1	65 1	66 1	1 4	2 1
Nickel, ICPES	89-03 254 28	89-03-254 28a	82.1	82 9	82 5	0 57	0 69
Nickel, ICPES	89-01 272 07	89-01-272 07a	78.0	81 0	79 5	2 1	2 7
Nickel, ICPES	89-03-254 35	89-03-254 35a	84 2	86 1	85 2	1 3	1 6
Nickel, ICPES	8902053 06A	8902053 07A	83.0	80 0	81 5	2 1	2 6
Silver, ICPES	89 03 254 35	89-03 254 35a	92 0	89 7	90 9	1 6	1 8
Silver, ICPES	89 03-254 28	89-03-254 28a	87 5	87 5	87 5	0	0
Silver, ICPES	8902053 06A	8902053 07A	88.0	85 0	86 5	2 1	2 5
Silver, ICPES	89-01-272 07	89-01-272 07a	79 0	82 0	80 5	2 1	2 6

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Sodium, ICPES	8902053 06A	8902053 07A	100		90.0		95.0	7.1	7.4
Sodium, ICPES	89-01-272 07	89-01-272 07a	100		110		105	7.1	6.7
Sodium, ICPES	89-03-254 28	89-03-254 28a	103		109		106	4.2	4.0
Sodium, ICPES	89-03-254 35	89-03-254 35a	99.0		97.0		98.0	1.4	1.4
Zinc, ICPES	89-01-272 07	89-01-272 07a	77.0		80.0		78.5	2.1	2.7
Zinc, ICPES	8902053 06A	8902053 07A	81.0		80.0		80.5	0.71	0.88
Zinc, ICPES	89-03-254 28	89-03-254 28a	84.1		83.8		83.9	0.21	0.25
Zinc, ICPES	89-03-254 35	89-03-254 35a	86.4		87.8		87.1	0.99	1.1
PCBs									
Analytical									
PCB-1016	8902018 26A	8902018 26B	0.10	ND	0.10	ND	ND	NC	NC
PCB-1016	8901272 03C	8901272 03F	0.44	ND	0.44	ND	ND	NC	NC
PCB-1221	8901272 03C	8901272 03F	0.87	ND	0.87	ND	ND	NC	NC
PCB-1221	8902018 26A	8902018 26B	0.20	ND	0.20	ND	ND	NC	NC
PCB-1232	8901272 03C	8901272 03F	0.87	ND	0.87	ND	ND	NC	NC
PCB-1232	8902018 26A	8902018 26B	0.20	ND	0.20	ND	ND	NC	NC
PCB-1242	8901272 03C	8901272 03F	0.44	ND	0.44	ND	ND	NC	NC
PCB-1242	8902018 26A	8902018 26B	0.10	ND	0.10	ND	ND	NC	NC
PCB-1248	8901272 03C	8901272 03F	0.44	ND	0.44	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

ATTACHMENT A.6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1248	8902018 26A	8902018 26B	0.10	ND	0.10	ND	ND	NC	NC
PCB-1254	8902018 26A	8902018 26B	0.20	ND	0.20	ND	ND	NC	NC
PCB-1254	8901272 03C	8901272 03F	0.87	ND	0.87	ND	ND	NC	NC
PCB-1260	8902018 26A	8902018 26B	0.20	ND	0.20	ND	ND	NC	NC
PCB-1260	8901272 03C	8901272 03F	0.87	ND	0.87	ND	ND	NC	NC
field duplicate									
PCB-1016	890.272 03C	8901272 04C	0.44	ND	0.42	ND	ND	NC	NC
PCB-1221	8901272 03C	8901272 04C	0.87	ND	0.84	ND	ND	NC	NC
PCB-1232	8901272 03C	8901272 04C	0.87	ND	0.84	ND	ND	NC	NC
PCB-1242	8901272 03C	8901272 04C	0.44	ND	0.42	ND	ND	NC	NC
PCB-1248	8901272 03C	8901272 04C	0.44	ND	0.42	ND	ND	NC	NC
PCB-1254	8901272 03C	8901272 04C	0.87	ND	0.84	ND	ND	NC	NC
PCB-1260	8901272 03C	8901272 04C	0.87	ND	0.84	ND	ND	NC	NC
matrix duplicate									
2,4,5,6-Tetrachlorometaxylene	8902018 33A	8902018 34A	97.0		99.0		98.0	1.4	1.4

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Dibutylchloroendate	8902018 33A	8902018 34A	98 0		99 0		98 5	0 71	0 72
PCB-1254	8902018 33A	8902018 34A	113		122		118	6 4	5 4
Volatile Organics									
field duplicate									
1,1,1-Trichloroethane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,1,2,2-Tetrachloroethane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,1,2-Trichloroethane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,1-Dichloroethane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,1-Dichloroethene	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,2,3-Trichloropropane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,2-Dichloroethane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
1,2-Dichloropropane	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
2-Chloroethyl vinyl ether	8901283 03A	8901283 04A	2 0	ND	2 0	ND	ND	NC	NC
2-Hexanone	8901283 03A	8901283 04A	10 0	ND	10 0	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLED OR ANALYZED) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
4-Methyl-2-pentanone	8901283 03A	8901283 04A	28.0		15.0		21.5	9.2	42.8
Acetone	8901283 03A	8901283 04A	160		89.0		125	50.2	40.3
Acrolein	8901283 03A	8901283 04A	100	ND	100	ND	ND	NC	NC
Acrylonitrile	8901283 03A	8901283 04A	25.0	ND	25.0	ND	ND	NC	NC
Benzene	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Bromoform	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Bromomethane	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Carbon Disulfide	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Carbon Tetrachloride	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Chlorobenzene	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Chlorodibromomethane	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Chloroethane	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Chloroform	8901283 03A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Chloromethane	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Dibromomethane	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Dichlorobromomethane	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Dichlorodifluoromethane	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Ethyl benzene	8901283 01A	8901283 04A	3.5	<5X	2.6	<5X	3.1	0.66	20.9
Ethyl methacrylate	8901283 01A	8901283 04A	50.0	ND	50.0	ND	ND	NC	NC
Iodomethane	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Methylene chloride	8901283 01A	8901283 04A	10.0	ND	10.0	ND	ND	NC	NC
Styrene	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Tetrachloroethylene	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Toluene	8901283 01A	8901283 04A	41.0		50.0		45.5	9.2	25.2
Trichloroethene	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Trichlorofluoromethane	8901283 01A	8901283 04A	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Vinyl Acetate	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Vinyl chloride	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Xylenes	8901283 01A	8901283 04A	9.2	<5X	6.9	<5X	8.1	1.6	20.2
cis-1,3-Dichloropropene	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
trans-1,2-Dichloroethene	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
trans-1,3-Dichloropropene	8901283 01A	8901283 04A	2.0	ND	2.0	ND	ND	NC	NC
Volatile Organics, Matrix Spike matrix duplicate									
1,1-Dichloroethene	8901283 07B	8901283 07C	52.0		54.0		53.0	1.4	2.7
1,1-Dichloroethene	8901283 03B	8901283 03C	53.0		56.0		54.5	2.1	3.9
1,2-Dichloroethane-d4	8901283 07B	8901283 07C	96.0		94.0		95.0	1.4	1.5
1,2-Dichloroethane-d4	8901283 03B	8901283 03C	95.0		94.0		94.5	0.71	0.75
Benzene	8901283 03B	8901283 03C	74.0		78.0		76.0	2.8	3.7
Benzene	8901283 07B	8901283 07C	69.0		69.0		69.0	0	0
Chlorobenzene	8901283 03B	8901283 03C	103		111		107	5.7	5.3

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Chlorobenzene	8901283 07B	8901283 07C	98.0		103		101	4.5	3.5
Toluene	8901283 07B	8901283 07C	90.0		92.0		91.0	1.4	1.6
Toluene	8901283 03B	8901283 03C	64.0		73.0		68.5	6.4	9.3
Toluene-d8	8901283 03B	8901283 03C	100		98.0		99.0	1.4	1.4
Toluene-d8	8901283 07B	8901283 07C	99.0		98.0		98.5	0.71	0.72
Trichloroethene	8901283 07B	8901283 07C	91.0		96.0		93.5	3.5	3.8
Trichloroethene	8901283 03B	8901283 03C	95.0		106		101	7.8	7.7
p-Bromofluorobenzene	8901283 07B	8901283 07C	91.0		94.0		92.5	2.1	2.3
p-Bromofluorobenzene	8901283 03B	8901283 03C	92.0		93.0		92.5	0.71	0.76
Semivolatile Organics									
field duplicate									
1,2,4,5-Tetrachlorobenzene	8901272 03B	8901272 04B	100	ND	100	ND	ND	NC	NC
1,2,4-Trichlorobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
1,2-Dichlorobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
1,2-Diphenylhydrazine	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
1,3-Dichlorobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
1,3-Dinitrobenzene	8901272 01B	8901272 04B	100	ND	100	ND	ND	NC	NC
1,4-Dichlorobenzene	8901272 01B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
1-Chloronaphthalene	8901272 01B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
1-Naphthylamine	8901272 01B	8901272 04B	100	ND	100	ND	ND	NC	NC
2,3,4,6-Tetrachlorophenol	8901272 01B	8901272 04B	100	ND	100	ND	ND	NC	NC
2,4,5-Trichlorophenol	8901272 01B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
2,4,6-Trichlorophenol	8901272 01B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
2,4-Dichlorophenol	8901272 01B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
2,4-Dimethylphenol	8901272 01B	8901272 04B	13.0	<5X	5.0	ND	9.0	5.7	62.9
2,4-Dinitrophenol	8901272 01B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
2,4-Dinitrotoluene	8901272 01B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
2,6-Dichlorophenol	8901272 01B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
2,6-Dinitrotoluene	8901272 01B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
2-Chloronaphthalene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
2-Chlorophenol	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
2-Methylnaphthalene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
2-Naphthylamine	8901272 03B	8901272 04B	100	ND	100	ND	ND	NC	NC
2-Nitroaniline	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
2-Nitrophenol	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
2-Picoline	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
3,3'-Dichlorobenzidene	8901272 03B	8901272 04B	20.0	ND	20.0	ND	ND	NC	NC
3-Methylcholanthrene	8901272 03B	8901272 04B	20.0	ND	20.0	ND	ND	NC	NC
3-Nitroaniline	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
4-Aminobiphenyl	8901272 03B	8901272 04B	250	ND	250	ND	ND	NC	NC
4-Bromophenyl phenyl ether	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
4-Chloro-3-methylphenol	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
4-Nitroaniline	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
4-Nitrophenol	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
5-Nitro-o-toluidine	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
Acenaphthene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Acenaphthylene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Acetophenone	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Aniline	8901272 03B	8901272 04B	20.0	ND	20.0	ND	ND	NC	NC
Anthracene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Benzidine	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(a)anthracene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(a)pyrene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(b)fluoranthene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Benzo(k)fluoranthene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Benzoic acid	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Benzyl alcohol	8901272 03B	8901272 04B	110		82.0		96.0	19.8	20.6
Butyl benzyl phthalate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Chlorobenzilate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Chrysene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Di-n-butylphthalate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Di-n-octylphthalate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Dibenz(a,j)acridine	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Dibenzo(a,h)anthracene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Dibenzofuran	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Diethylphthalate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Dimethylphthalate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Diphenylamine	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Ethyl methanesulfonate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Fluoranthene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Fluorene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Hexachlorobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Hexachlorobutadiene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Hexachlorocyclopentadiene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Hexachloroethane	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Isophorone	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Methyl methanesulfonate	8901272 03B	8901272 04B	20.0	ND	20.0	ND	ND	NC	NC
N-Nitrosodi-n-butylamine	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
N-Nitrosodimethylamine	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
N-Nitrosodiphenylamine	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
N-Nitrosodipropylamine	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
N-Nitrosopiperidine	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
Naphthalene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Nitrobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Pentachlorobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Pentachloronitrobenzene	8901272 03B	8901272 04B	100	ND	100	ND	ND	NC	NC
Pentachlorophenol	8901272 03B	8901272 04B	50.0	ND	50.0	ND	ND	NC	NC
Phenacetin	8901272 03B	8901272 04B	100	ND	100	ND	ND	NC	NC
Phenanthrene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Phenol	8901272 03B	8901272 04B	100		92.0		96.0	5.7	5.9
Pronamide	8901272 03B	8901272 04B	100	ND	100	ND	ND	NC	NC
Pyrene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
a,a-Dimethylphenethylamine	8901272 03B	8901272 04B	25.0	ND	25.0	ND	ND	NC	NC
bis(2-Chloroethoxy)methane	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
bis(2-Chloroethyl)ether	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
bis(2-Ethylhexyl)phthalate	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
o-Cresol	8901272 03B	8901272 04B	11.0	<5X	12.0	<5X	11.5	0.71	6.1
p-Chloroaniline	8901272 03B	8901272 04B	20.0	ND	20.0	ND	ND	NC	NC
p-Cresol	8901272 03B	8901272 04B	92.0		89.0		90.5	2.1	2.3
p-Dimethylaminoazobenzene	8901272 03B	8901272 04B	10.0	ND	10.0	ND	ND	NC	NC
Semivolatile Organics, Matrix Spike matrix duplicate									
1,2,4-Trichlorobenzene	8902018 27A	8902018 28A	106		108		107	1.4	1.3
1,2,4-Trichlorobenzene	8901272 08B	8901272 09B	102		108		105	4.2	4.0
1,4-Dichlorobenzene	8902018 27A	8902018 28A	76.0		74.0		75.0	1.4	1.9
1,4-Dichlorobenzene	8901272 08B	8901272 09B	87.0		97.0		92.0	7.1	7.7
2,4,6-Tribromophenol	8901272 08B	8901272 09B	110		113		112	2.1	1.9
2,4,6-Tribromophenol	8902018 27A	8902018 28A	9.0		12.0		10.5	2.1	20.2
2,4-Dinitrotoluene	8901272 08B	8901272 09B	105		99.0		102	4.2	4.2

NC: Not Calculable.
ND: Not Detected.

394

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
2,4-Dinitrotoluene	8902018 27A	8902018 28A	87.0	87.0	87.0	0	0
2-Chlorophenol	8902018 27A	8902018 28A	24.0	21.0	22.5	0.71	3.0
2-Chlorophenol	8901272 08B	8901272 09B	104	102	103	1.4	1.4
2-Fluorobiphenyl	8902018 27A	8902018 28A	84.0	81.0	82.5	2.1	2.6
2-Fluorobiphenyl	8901272 08B	8901272 09B	79.0	85.0	82.0	4.2	5.2
2-Fluorophenol	8901272 08B	8901272 09B	154	161	158	4.9	3.1
2-Fluorophenol	8902018 27A	8902018 28A	7.0	10.0	8.5	2.1	25.0
Acenaphthene	8901272 08B	8901272 09B	76.0	78.0	77.0	1.4	1.8
Acenaphthene	8902018 27A	8902018 28A	73.0	73.0	73.0	0	0
Di-n-propylnitrosamine	8901272 08B	8901272 09B	76.0	87.0	81.5	7.8	9.5
Di-n-propylnitrosamine	8902018 27A	8902018 28A	103	107	105	2.8	2.7
Nitrobenzene-d5	8902018 27A	8902018 28A	106	108	107	1.4	1.3
Nitrobenzene-d5	8901272 08B	8901272 09B	89.0	94.0	91.5	3.5	3.9
Nitrophenol	8901272 08B	8901272 09B	87.0	71.0	79.0	11.3	14.3
Nitrophenol	8902018 27A	8902018 28A	3.0	2.6	2.8	0.28	10.1
Pentachlorophenol	8901272 08B	8901272 09B	99.0	102	101	2.1	2.1
Pentachlorophenol	8902018 27A	8902018 28A	4.0		2.0	2.8	141

NC: Not Calculable

ND: Not Detected

295

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Phenol	8901272 08B	8901272 09B	120		110		115	7.1	6.1
Phenol	8902018 27A	8902018 28A	80.0		68.0		74.0	8.5	11.5
Phenol-d5	8901272 08B	8901272 09B	78.0		87.0		82.5	6.4	7.7
Phenol-d5	8902018 27A	8902018 28A	27.0		29.0		28.0	1.4	5.1
Pyrene	8902018 27A	8902018 28A	62.0		65.0		63.5	2.1	3.3
Pyrene	8901272 08B	8901272 09B	75.0		76.0		75.5	0.71	0.94
Terphenyl-d14	8902018 27A	8902018 28A	77.0		78.0		77.5	0.71	0.91
Terphenyl-d14	8901272 08B	8901272 09B	76.0		69.0		72.5	4.9	6.8
p-Chloro-m-cresol	8901272 08B	8901272 09B	150		142		146	5.7	3.9
p-Chloro-m-cresol	8902018 27A	8902018 28A	93.0		90.0		91.5	2.1	2.3
9040									
field duplicate									
pH	T129 SWL	T129D SWL	11.5		11.5		11.5	0.0071	0.061
Metals, Cold Vapor									
field duplicate									
Mercury	89-01-272-03	89-01-272-04	0.00020	ND	0.00020	ND	ND	NC	NC
matrix duplicate									

NC: Not Calculable
ND: Not Detected

396

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Mercury	8901272 08A	8901272 09A	85.0		92.0		88.5	4.9	5.8
Mercury	8902053 06A	8902053 07A	100		100		100	0	0
Predigestion									
Mercury	89-01-273 06	89-01-273 06a	0.17		0.16		0.17	0.0071	4.3
D-1498									
field duplicate									
Eh	T129 SWL	T129D SWL	-59.0		-57.0		-58.0	1.4	2.4
Metals, Graphite Furnace									
field duplicate									
Arsenic, graphite AA	8901272 03	8901272 04	0.017		0.016		0.017	0.00071	4.3
Selenium, graphite AA	8901272 03	8901272 04	0.0050	ND	0.0050	ND	ND	NC	NC
Thallium, graphite AA	8901272 03	8901272 04	0.0010	ND	0.0010	ND	ND	NC	NC
matrix duplicate									
Arsenic, graphite AA	89-02-310 07	89-02-310 07a	86.0		76.0		81.0	7.1	8.7
Arsenic, graphite AA	8902053 06A	8902053 07A	82.0		82.0		82.0	0	0
Arsenic, graphite AA	89-03-258 04	89-03-258 04a	74.0		74.0		74.0	0	0
Arsenic, graphite AA	89-03-258 01	89-03-258 01a	42.0		0		31.0	41.8	135
Arsenic, graphite AA	8902310 07	8902310 07a	86.0		76.0		81.0	7.1	8.7

NC: Not Calculable
ND: Not Detected

397

ATTACHMENT A 6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Arsenic, graphite AA	8901272 08A	8901272 09A	70 0	74 0	72 0	2 [illegible]	3 9
Lead, graphite AA	89-03-258 04	89-03-258 04a	92 0	76 0	84 0	11 3	13 5
Lead, graphite AA	89-02-310 07	89-02-310 07a	108	94 0	101	9 9	9 8
Lead, graphite AA	8907310 01	8903210 01a	108	94 0	101	9 9	9 8
Selenium, graphite AA	89-03-258 04	89-03-258 04a	0	0	0	0	
Selenium, graphite AA	8901272 08A	8901272 09A	0	14 0	7 0	9 9	141
Selenium, graphite AA	89-02-310 07	89-02-310 07a	70 0	64 0	67 0	4 2	6 3
Selenium, graphite AA	8902053 06A	8902053 07A	0	0	0	0	
Selenium, graphite AA	8902310 07	8902310 07a	70 0	64 0	67 0	4 2	6 3
Selenium, graphite AA	89-03-258 07	89-03-258 07a	8 0	12 0	10 0	2 8	28 3
Thallium, graphite AA	8901272 08A	8901272 09A	54 0	52 0	53 0	1 4	2 7
Thallium, graphite AA	8902310 07	8902310 07a	42 0	36 0	39 0	4 2	10 9
Thallium, graphite AA	8902310 07	8902310 07a	42 0	36 0	39 0	4 2	10 9
Thallium, graphite AA	89-02-310 07	89-02-310 07a	42 0	36 0	39 0	4 2	10 9
Thallium, graphite AA	89-03-258 07	89-03-258 07a	28 0	28 0	28 0	0	0
Thallium, graphite AA	8902310 04	8902310 04a	34 7	38 8	36 8	2 9	7 9
Thallium, graphite AA	89-03-258 04	89-03-258 04a	36 0	34 0	35 0	1 4	4 0
Thallium, graphite AA	8902053 06A	8902053 07A	26 0	26 0	26 0	0	0
Infrared Methods							
field duplicate							
Oil and grease, infrared	8901272 03	8901272 04	12 0	12 0	12 0	0	0

NC: Not Calculable
ND: Not Detected

395

ATTACHMENT A.6 DUPLICATE RESULTS FOR POST-TREATMENT TCLP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = TCLP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Predigestion							
Oil and grease, infrared	89-01-272-01	89-01-272-01a	12.0	11.0	11.5	0.71	6.1
Filterable Residue (TDS)							
Field duplicate							
Filterable Residue (TDS)	89-01-272-01	89-01-272-04	9150	9220	9185	49.5	0.54
Predigestion							
Filterable Residue (TDS)	89-01-272-06	89-01-272-06a	8620	8420	8520	141	1.7

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A 7 DUPLICATE RESULTS FOR POST TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	8902059 04	8902059 07	0 20	ND	0 20	ND	ND	NC	NC
Antimony, ICPES	8902059 04	8902059 07	0 20	ND	0 20	ND	ND	NC	NC
Barium, ICPES	8902059 04	8902059 07	1 6		1 5		1 5	0 14	9 4
Beryllium, ICPES	8902059 04	8902059 07	0 0020	ND	0 0020	ND	ND	NC	NC
Cadmium, ICPES	8902059 04	8902059 07	0 0050	ND	0 0050	ND	ND	NC	NC
Chromium, ICPES	89 03 184 02	89 03 185 30	0 075	<5X	0 075	<5X	0 075	0	0
Copper, ICPES	89 02 059 04	89 02 059 07	0 039	<5X	0 032	<5X	0 036	0 0049	13 4
Lead, ICPES	89 02 059 04	89 02 059 07	0 050	ND	0 050	ND	ND	NC	NC
Nickel, ICPES	89 02 059 04	89 02 059 07	0 020	ND	0 020	ND	ND	NC	NC
Silver, ICPES	8902059 04	8902059 07	0 030	ND	0 030	ND	ND	NC	NC
Sodium, ICPES	89 02 059 04	89 02 059 07	0 0050	ND	0 0050	ND	ND	NC	NC
Zinc, ICPES	8902059 04	8902059 07	0 020	ND	0 020	ND	ND	NC	NC

NC Not Calculable
ND Not Detected

400

ATTACHMENT A 7 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
matrix duplicate							
Aluminum, ICPES	89-03-255 09	89-03-255 09a	99.7	93.6	96.7	4.3	4.5
Aluminum, ICPES	8902061 06A	8902061 07A	89.0	91.0	90.0	1.4	1.6
Aluminum, ICPES	89-03-255 02	89-03-255 02a	88.2	89.0	88.5	0.57	0.64
Aluminum, ICPES	8902059 10A	8902059 11A	90.0	90.0	90.0	0	0
Antimony, ICPES	89-03-255 09	89-03-255 09a	77.5	77.7	77.6	0.14	0.18
Antimony, ICPES	8902061 06A	8902061 07A	88.0	87.0	87.5	0.71	0.81
Antimony, ICPES	8902059 10A	8902059 11A	86.0	89.0	87.5	2.1	2.4
Antimony, ICPES	89-03-255 02	89-03-255 02a	78.8	76.9	77.9	1.3	1.7
Barium, ICPES	8902061 06A	8902061 07A	91.0	96.0	93.5	3.5	3.8
Barium, ICPES	89-03-255 09	89-03-255 09a	82.0	91.0	86.5	6.4	7.4
Barium, ICPES	8902059 10A	8902059 11A	83.0	87.0	85.0	2.8	3.3
Barium, ICPES	89-03-255 02	89-03-255 02a	86.0	90.0	88.0	2.8	3.2
Beryllium, ICPES	8902061 06A	8902061 07A	88.0	88.0	88.0	0	0
Beryllium, ICPES	8902059 10A	8902059 11A	87.0	88.0	87.5	0.71	0.81
Beryllium, ICPES	89-03-255 09	89-03-255 09a	79.4	79.7	79.6	0.21	0.27
Beryllium, ICPES	89-03-255 02	89-03-255 02a	80.3	81.1	80.7	0.57	0.70
Cadmium, ICPES	89-03-255 02	89-03-255 02a	84.1	85.6	85.4	0.35	[illegible]
Cadmium, ICPES	89-03-255 09	89-03-255 09a	84.4	86.0	85.2	1.1	1.3
Cadmium, ICPES	8902059 10A	8902059 11A	80.0	80.0	80.0	0	0
Cadmium, ICPES	8902061 06A	8902061 07A	80.0	80.0	80.0	0	0

NC: Not Calculable
ND: Not Detected

401

ATTACHMENT A 7 DUPLICATE RESULTS FOR POST TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Chromium, ICPES	89-03-255 02	89-03-255 02a	79.7	80.1	79.9	0.28	0.35
Chromium, ICPES	89-03-255 09	89-03-255 09a	81.3	81.8	81.6	0.35	0.43
Chromium, ICPES	89-03-184 12	89-03-184 13	81.0	82.0	81.5	0.71	0.87
Chromium, ICPES	89-03-184 05	89-03-184 06	82.0	82.0	82.0	0	0
Copper, ICPES	89-03-255 09	89-03-255 09a	85.0	84.8	84.9	0.15	0.17
Copper, ICPES	8902059 10A	8902059 11A	85.0	85.0	85.0	0	0
Copper, ICPES	89-03-255 02	89-03-255 02a	80.1	79.6	79.9	0.35	0.44
Copper, ICPES	8902061 06A	8902061 07A	85.0	83.0	84.0	1.4	1.7
Lead, ICPES	8902059 06	8902059 07	0.050 ND	0.050 ND	ND	NC	NC
Lead, ICPES	8902059 10A	8902059 11A	78.0	80.0	79.0	1.4	1.8
Lead, ICPES	8902061 06A	8902061 07A	79.0	82.0	80.5	2.1	2.6
Nickel, ICPES	89-03-255 09	89-03-255 09a	83.2	84.2	83.7	0.71	0.84
Nickel, ICPES	8902059 10A	8902059 11A	80.0	80.0	80.0	0	0
Nickel, ICPES	8902061 06A	8902061 07A	80.0	80.0	80.0	0	0
Nickel, ICPES	89-03-255 02	89-03-255 02a	79.7	81.1	80.4	0.99	1.2
Silver, ICPES	8902059 10A	8902059 11A	89.0	89.0	89.0	0	0
Silver, ICPES	89-03-255 02	89-03-255 02a	88.4	89.5	89.0	0.78	0.87
Silver, ICPES	89-03-255 09	89-03-255 09a	89.5	90.8	90.2	0.92	1.1
Silver, ICPES	8902061 06A	8902061 07A	89.0	89.0	89.0	0	0
Sodium, ICPES	89-03-255 02	89-03-255 02a	96.0	103	99.5	4.9	5.0

NC: Not Calculable
ND: Not Detected

402

ATTACHMENT A 7 DUPLICATE RESULTS FOR POST TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Sodium, ICPES	8902059 10A	8902059 11A	91.0		98.0		94.5	4.9	5.2
Sodium, ICPES	8902061 06A	8902061 07A	101		101		101	0	0
Sodium, ICPES	89-03-255 09	89-03-255 09a	97.0		102		99.5	3.5	3.6
Zinc, ICPES	8902061 06A	8902061 07A	78.0		77.0		77.5	0.71	0.91
Zinc, ICPES	89-03-255 02	89-03-255 02a	80.2		80.8		80.5	0.42	0.53
Zinc, ICPES	8902059 10A	8902059 11A	77.0		78.0		77.5	0.71	0.91
Zinc, ICPES	89-03-255 09	89-03-255 09a	80.4		81.6		81.0	0.85	1.0
PCBs									
Analytical									
PCB-1016	8902042 01A	8902042 01B	0.40	ND	0.40	ND	ND	NC	NC
PCB-1016	8902042 03A	8902042 03B	0.41	ND	0.41	ND	ND	NC	NC
PCB-1221	8902042 01A	8902042 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1221	8902042 03A	8902042 03B	0.82	ND	0.82	ND	ND	NC	NC
PCB-1232	8902042 01A	8902042 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1232	8902042 03A	8902042 03B	0.82	ND	0.82	ND	ND	NC	NC
PCB-1242	8902042 01A	8902042 01B	0.40	ND	0.40	ND	ND	NC	NC
PCB-1242	8902042 03A	8902042 03B	0.41	ND	0.41	ND	ND	NC	NC
PCB-1248	8902042 01A	8902042 01B	0.40	ND	0.40	ND	ND	NC	NC
PCB-1248	8902042 03A	8902042 03B	0.41	ND	0.41	ND	ND	NC	NC

NC: Not Calculable

ND: Not Detected

402

ATTACHMENT A.7 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	I CV
PCB-1254	8902042 01A	8902042 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1254	8902042 03A	8902042 03B	0.82	ND	0.82	ND	ND	NC	NC
PCB-1260	8902042 01A	8902042 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1260	8902042 03A	8902042 03B	0.82	ND	0.82	ND	ND	NC	NC
field duplicate									
PCB-1016	8902042 02A	8902042 13A	0.40	ND	0.020	ND	ND	NC	NC
PCB-1221	8902042 02A	8902042 13A	0.80	ND	0.040	ND	ND	NC	NC
PCB-1232	8902042 02A	8902042 13A	0.80	ND	0.040	ND	ND	NC	NC
PCB-1242	8902042 02A	8902042 13A	0.40	ND	0.020	ND	ND	NC	NC
PCB-1248	8902042 02A	8902042 13A	0.40	ND	0.020	ND	ND	NC	NC
PCB-1254	8902042 02A	8902042 13A	0.80	ND	0.040	ND	ND	NC	NC
PCB-1260	8902042 02A	8902042 13A	0.80	ND	0.040	ND	ND	NC	NC
matrix duplicate									
2,4,5,6-Tetrachlorometaxylene	8902042 16A	8902042 17A	125		124		125	0.71	0.57
2,4,5,6-Tetrachlorometaxylene	8902042 14A	8902042 15A	76.0		80.0		78.0	2.8	3.6

NC: Not Calculable.
ND: Not Detected.

404

ATTACHMENT A.7 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Dibutylchloroendate	8902042 14A	8902042 15A	81.0	86.0	83.5	3.5	4.2
Dibutylchloroendate	8902042 16A	8902042 17A	99.0	95.0	97.0	2.8	2.9
PCB-1254	8902042 16A	8902042 17A	135	127	131	5.7	4.3
PCB-1254	8902042 14A	8902042 15A	107	105	106	1.4	1.3
9040							
field duplicate							
pH	E227 SWL	E227D SWL	11.0	11.2	11.1	0.099	0.89
Metals, Cold Vapor							
field duplicate							
Mercury	89-02-059 04	89-02-059 07	0.0020 ND	0.0020 ND	ND	NC	NC
matrix duplicate							
Mercury	8902059 10A	8902059 11A	95.0	95.0	95.0	0	0
Mercury	8902061 06A	8902061 07A	95.0	98.0	96.5	2.1	2.2
D-1498							
field duplicate							
Eh	E227 SWL	E227D SWL	-8.0	25.0	8.5	23.3	275

NC: Not Calculable.
ND: Not Detected.

405

ATTACHMENT A.7 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, Graphite Furnace									
field duplicate									
Arsenic, graphite AA	8902059 04	8902059 07	0.0020	<5X	0.0020	<5X	0.0020	0	0
Selenium, graphite AA	8902059 04	8902059 07	0.0040	<5X	0.0040	<5X	0.0040	0	0
Thallium, graphite AA	8902059 04	8902059 07	0.00050	ND	0.0010		0.00075	0.00035	47.1
matrix duplicate									
Arsenic, graphite AA	8902061 06A	8902061 07A	98.0		94.0		96.0	2.8	2.9
Arsenic, graphite AA	8902059 10A	8902059 11A	74.0		74.0		74.0	0	0
Arsenic, graphite AA	89-03-258 13	89-03-258 13a	74.0		72.0		73.0	1.4	1.9
Lead, graphite AA	89-03-255 11	89-03-255 11a	86.0		92.0		89.0	4.2	4.8
Selenium, graphite AA	89-03-258 16	89-03-258 16a	0		4.0		2.0	2.8	141
Selenium, graphite AA	8902061 06A	8902061 07A	28.0		28.0		28.0	0	0
Selenium, graphite AA	89-03-258 13	89-03-258 13a	0		0		0	0	
Selenium, graphite AA	8902059 10A	8902059 11A	48.0		50.0		49.0	1.4	2.9
Thallium, graphite AA	89-03-258 13	89-03-258 13a	46.0		44.0		45.0	1.4	3.1
Thallium, graphite AA	89-03-258 16	89-03-258 16a	32.0		30.0		31.0	1.4	4.6
Thallium, graphite AA	8902061 06A	8902061 07A	8.0		10.0		9.0	1.4	15.7
Thallium, graphite AA	8902059 10A	8902059 11A	24.0		24.0		24.0	0	0

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.7 DUPLICATE RESULTS FOR POST-TREATMENT EP LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = EP

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Infrared Methods							
field duplicate							
Oil and grease, infrared	89-02-059 04	89-02-059 07	3.9	3.7	3.8	0.14	3.7
Predigestion							
Oil and grease, infrared	89-02-059 06	89-02-059 06a	4.2	3.9	4.1	0.21	5.2
Filterable Residue (TDS)							
field duplicate							
Filterable Residue (TDS)	89-02-059 04	89-02-059 07	8868	9263	9066	279	3.1
Predigestion							
Filterable Residue (TDS)	89-02-059 07	89-02-059 07a	9223	9303	9263	56.6	0.61
Filterable Residue (TDS)	89-02-061 05	89-02-061 05a	9027	9238	9133	149	1.6

NC: Not Calculable.
ND: Not Detected.

407

ATTACHMENT A.8 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	8902056 03D	8902056 06D	0.20	ND	0.20	ND	ND	NC	NC
Aluminum, ICPES	8902056 04D	8902108 01A	0.80	<5X	0.60	<5X	0.70	0.14	20.2
Aluminum, ICPES	8902056 02D	8902056 05D	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8902056 04D	8902108 01A	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8902056 03D	8902056 06D	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8902056 02D	8902056 05D	0.20	ND	0.20	ND	ND	NC	NC
Barium, ICPES	8902056 03D	8902056 06D	5.4		5.0		5.2	0.28	5.4
Barium, ICPES	8902056 02D	8902056 05D	9.7		9.7		9.7	0	0
Barium, ICPES	8902056 04D	8902108 01A	1.3		1.3		1.3	0	0
Beryllium, ICPES	8902056 04D	8902108 01A	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8902056 02D	8902056 05D	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8902056 03D	8902056 06D	0.0020	ND	0.0020	ND	ND	NC	NC
Cadmium, ICPES	8902056 04D	8902108 01A	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8902056 02D	8902056 05D	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8902056 03D	8902056 06D	0.0050	ND	0.0050	ND	ND	NC	NC
Calcium, ICPES	8902056 02D	8902056 05D	930		980		955	35.4	3.7
Calcium, ICPES	8902056 03D	8902056 06D	790		760		775	21.2	2.7
Calcium, ICPES	8902056 04D	8902108 01A	400		380		390	14.1	3.6

NC: Not Calculable.
ND: Not Detected.

408

ATTACHMENT A.8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Chromium, ICPES	8903183 36A	8903183 39A	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	8903183 37A	8903184 27A	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	8903183 35A	8903183 38A	0.030	ND	0.030	ND	ND	NC	NC
Copper, ICPES	8902056 02D	8902056 05D	0.17		0.16		0.17	0.0071	4.3
Copper, ICPES	8902056 03D	8902056 06D	0.050	<5X	0.040	<5X	0.045	0.0071	15.7
Copper, ICPES	8902056 04D	8902108 01A	0.010	ND	0.030	<5X	0.020	0.014	70.7
Lead, ICPES	8902056 03D	8902056 06D	0.10	<5X	0.025	ND	0.063	0.053	84.9
Lead, ICPES	8902056 02D	8902056 05D	0.050	ND	0.050	ND	ND	NC	NC
Lead, ICPES	8902056 04D	8902108 01A	0.050	ND	0.050	ND	ND	NC	NC
Nickel, ICPES	8902056 02D	8902056 05D	0.030	<5X	0.020	<5X	0.025	0.0071	28.3
Nickel, ICPES	8902056 03D	8902056 06D	0.020	ND	0.020	ND	ND	NC	NC
Nickel, ICPES	8902056 04D	8902108 01A	0.020	ND	0.020	ND	ND	NC	NC
Silver, ICPES	8902056 04D	8902108 01A	0.030	ND	0.030	ND	ND	NC	NC
Silver, ICPES	8902056 02D	8902056 05D	0.030	ND	0.030	ND	ND	NC	NC
Silver, ICPES	8902056 03D	8902056 06D	0.030	ND	0.030	ND	ND	NC	NC
Sodium, ICPES	8902056 04D	8902108 01A	4.0	<5X	5.0	<5X	4.5	0.71	15.7
Sodium, ICPES	8902056 02D	8902056 05D	79.0		79.0		79.0	0	0
Sodium, ICPES	8902056 03D	8902056 06D	17.0		15.0		16.0	1.4	8.8
Zinc, ICPES	8902056 04D	8902108 01A	0.020	ND	0.020	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

ATTACHMENT A 8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Zinc, ICPES	8902056 02D	8902056 05D	0.020	ND	0.020	ND	ND	NC	NC
Zinc, ICPES	8902056 03D	8902056 06D	0.020	ND	0.020	ND	ND	NC	NC
matrix duplicate									
Aluminum, ICPES	8902214 09A	8902214 09A	91.2		92.2		91.7	0.71	0.77
Aluminum, ICPES	89-03-255 17	89-03-255 17a	101		97.0		99.0	2.8	2.9
Aluminum, ICPES	8902108 04A	8902108 05A	92.0		90.0		91.0	1.4	1.6
Aluminum, ICPES	89-02-056 01	89-02-056 01a	88.0		89.0		88.5	0.71	0.80
Aluminum, ICPES	89-02-055 06	89-02-053 07	87.0		87.0		87.0	0	0
Aluminum, ICPES	8902213 03A	8902213 04A	91.0		91.0		91.0	0	0
Aluminum, ICPES	89-02-138 01a	89-02-138 01b	96.8		94.6		95.7	1.6	1.8
Antimony, ICPES	89-03-255 17	89-03-255 17a	80.3		81.8		81.1	1.1	1.7
Antimony, ICPES	89-02-056 01	89-02-056 01a	83.0		85.0		84.0	1.4	1.7
Antimony, ICPES	8902108 04A	8902108 05A	82.0		79.0		80.5	2.1	2.6
Antimony, ICPES	8902213 03A	8902213 04A	85.0		87.0		86.0	1.4	1.6
Antimony, ICPES	8902214 09A	8902214 09A	91.0		93.0		92.0	1.4	1.5
Antimony, ICPES	89-02-138 01a	89-02-138 01b	96.6		92.6		94.6	2.8	3.0
Antimony, ICPES	89-02-055 06	89-02-053 07	84.0		84.0		84.0	0	0
Barium, ICPES	89-03-255 17	89-03-255 17a	95.0		88.0		91.5	4.9	5.4
Barium, ICPES	8902213 03A	8902213 04A	88.0		87.0		87.5	0.71	0.81
Barium, ICPES	89-02-055 06	89-02-053 07	80.0		80.0		80.0	0	0
Barium, ICPES	89-02-056 01	89-02-056 01a	84.0		87.0		85.5	2.1	2.5
Barium, ICPES	89-02-138 01a	89-02-138 01b	111		96.0		104	10.6	10.3
Barium, ICPES	8902214 09A	8902214 09A	91.0		92.0		91.5	0.71	0.77

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A-8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Barium, ICPES	8902108 04A	8902108 05A	110	108	109	1.4	1.3
Beryllium, ICPES	89-02-056 01	89-02-056 01a	90.0	91.0	90.5	0.71	0.78
Beryllium, ICPES	89-02-138 01a	89-02-138 01b	94.4	92.5	93.5	1.3	1.4
Beryllium, ICPES	89-02-055 06	89-02-053 07	88.0	88.0	88.0	0	0
Beryllium, ICPES	8902108 04A	8902108 05A	89.0	89.0	89.0	0	0
Beryllium, ICPES	8902214 09A	8902214 09A	95.0	94.0	94.5	0.71	0.75
Beryllium, ICPES	8902213 03A	8902213 04A	88.0	88.0	88.0	0	0
Beryllium, ICPES	89-03-255 17	89-03-255 17a	83.3	82.4	82.9	0.64	0.77
Cadmium, ICPES	89-02-056 01	89-02-056 01a	86.0	85.0	86.5	0.71	0.85
Cadmium, ICPES	89-02-138 01a	89-02-138 01b	93.1	91.9	92.5	0.85	0.92
Cadmium, ICPES	8902214 09A	8902214 09A	94.0	94.0	94.0	0	0
Cadmium, ICPES	89-02-055 06	89-02-053 07	81.0	80.0	80.5	0.71	0.88
Cadmium, ICPES	8902213 03A	8902213 04A	89.0	90.0	89.5	0.71	0.79
Cadmium, ICPES	89-03-255 17	89-03-255 17a	84.4	83.8	84.1	0.42	0.50
Cadmium, ICPES	8902108 04A	8902108 05A	85.0	86.0	85.5	0.71	0.83
Chromium, ICPES	89-03-185 16	89-03-185 16a	92.0	92.0	92.0	0	0
Chromium, ICPES	89-03-183 34	89-03-183 34a	86.0	87.0	86.5	0.71	0.82
Chromium, ICPES	89-03-183 32	89-03-181 33	83.0	82.0	82.5	0.71	0.86
Chromium, ICPES	89-03-184 30	89-03-184 31	85.0	86.0	85.5	0.71	0.83
Chromium, ICPES	89-03-255 17	89-03-255 17a	85.0	84.6	84.8	0.28	0.33
Chromium, ICPES	89-03-185 05	89-03-185 06	86.0	86.0	86.0	0	0
Chromium, ICPES	89-03-184 34	89-03-184 34	91.1	89.9	90.5	0.85	0.94

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Line Value	Duplicate Value	Mean Concentration	Standard Deviation	2 SD
Copper, ICPES	89-02-056 01	89-02-056 01a	87.0	89.0	88.0	1.4	1.8
Copper, ICPES	89-03-255 17	89-03-255 17a	85.0	83.9	84.5	0.78	0.92
Copper, ICPES	89-02-055 06	89-02-053 07	87.0	87.0	87.0	0	0
Copper, ICPES	89-02-138 01a	89-02-138 01b	96.2	93.7	95.0	1.8	1.9
Copper, ICPES	8902214 09A	8902214 09A	92.0	92.0	92.0	0	0
Copper, ICPES	8902108 04A	8902108 05A	87.0	87.0	87.0	0	0
Copper, ICPES	8902213 03A	8902213 04A	91.0	90.0	90.5	0.71	0.78
Lead, ICPES	8902108 04A	8902108 05A	90.0	86.0	88.0	2.8	3.2
Lead, ICPES	8902213 03A	8902213 04A	94.0	95.0	94.5	0.71	0.75
Lead, ICPES	89-02-056 01	89-02-056 01a	86.0	84.0	85.0	1.4	1.7
Lead, ICPES	89-02-055 06	89-02-053 07	86.0	80.0	83.0	4.2	5.1
Lead, ICPES	89-02-138 01a	89-02-138 01b	86.1	86.7	86.4	0.42	0.49
Lead, ICPES	8902214 09A	8902214 09A	92.0	93.0	92.5	0.71	0.76
Nickel, ICPES	8902108 04A	8902108 05A	82.0	82.0	82.0	0	0
Nickel, ICPES	89-03-255 17	89-03-255 17a	83.9	82.9	83.4	0.71	0.85
Nickel, ICPES	8902213 03A	8902213 04A	84.0	86.0	85.0	1.4	1.7
Nickel, ICPES	89-02-055 06	89-02-053 07	83.0	83.0	83.0	0	0
Nickel, ICPES	89-02-056 01	89-02-056 01a	83.0	83.0	83.0	0	0
Nickel, ICPES	89-02-138 01a	89-02-138 01b	95.6	92.7	94.2	2.04	2.48
Nickel, ICPES	8902214 09A	8902214 09A	91.0	91.0	91.0	0	0
Silver, ICPES	8902214 09A	8902214 09A	91.0	92.0	91.5	0.71	0.77
Silver, ICPES	89-02-055 06	89-02-053 07	85.0	84.0	84.5	0.71	0.84
Silver, ICPES	89-03-255 17	89-03-255 17a	86.9	85.2	86.1	1.2	1.4

NC: Not Calculable
ND: Not Detected

ATTACHMENT A # DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% SV
Silver, ICPES	8902108 04A	8902108 05A	89.0		88.0		88.5	0.71	0.80
Silver, ICPES	8902213 03A	8902213 04A	89.0		88.0		88.5	0.71	0.80
Silver, ICPES	89-02-056 01	89-02-056 01a	84.0		85.5		84.5	0.71	0.84
Silver, ICPES	89-02-138 01a	89-02-138 01b	91.7		91.1		91.4	0.42	0.46
Sodium, ICPES	89-02-055 06	89-02-053 07	80.0		80.0		80.0	0	0
Sodium, ICPES	89-02-056 01	89-02-056 01a	85.0		94.0		89.5	6.4	7.1
Sodium, ICPES	8902108 04A	8902108 05A	83.0		87.0		85.0	2.8	3.3
Sodium, ICPES	8902213 03A	8902213 04A	105		107		106	1.4	1.3
Sodium, ICPES	89-03-255 17	89-03-255 17a	90.0		89.0		89.5	0.71	0.79
Sodium, ICPES	8902214 04A	8902214 09A	100		99.0		99.5	0.71	0.71
Sodium, ICPES	89-02-138 01a	89-02-138 01b	108		92.0		100	11.3	11.3
Zinc, ICPES	8902214 09A	8902214 09A	95.0		95.0		95.0	0	0
Zinc, ICPES	89-02-055 06	89-02-053 07	82.0		82.0		82.0	0	0
Zinc, ICPES	8902108 04A	8902108 05A	85.0		84.0		84.5	0.71	0.84
Zinc, ICPES	89-02-056 01	89-02-056 01a	85.0		86.0		85.5	0.71	0.83
Zinc, ICPES	8902213 03A	8902213 04A	90.0		90.0		90.0	0	0
Zinc, ICPES	89-03-255 17	89-03-255 17a	83.5		83.4		83.5	0.071	0.085
Zinc, ICPES	89-02-138 01a	89-02-138 01b	93.1		91.6		92.4	1.1	1.1
PCBs									
Analytical									
PCB-1016	8902101 01A	8902101 01B	0.020	ND	0.020	ND	ND	NC	NC
PCB-1016	8902018 22A	8902018 22B	0.41	ND	0.41	ND	ND	NC	NC

NC Not Calculable

ND Not Detected

ATTACHMENT A 8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	1 CV
PCB-1016	8902136 03A	8902136 03B	0.43	ND	0.43	ND	ND	NC	NC
PCB-1016	8902136 01A	8902136 01B	0.40	ND	0.40	ND	ND	NC	NC
PCB-1221	8902136 03A	8902136 03B	0.86	ND	0.86	ND	ND	NC	NC
PCB-1221	8902018 22A	8902018 22B	0.82	ND	0.82	ND	ND	NC	NC
PCB-1221	8902101 01A	8902101 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1221	8902136 01A	8902136 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1232	8902136 03A	8902136 03B	0.86	ND	0.86	ND	ND	NC	NC
PCB-1232	8902018 22A	8902018 22B	0.82	ND	0.82	ND	ND	NC	NC
PCB-1232	8902101 01A	8902101 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1232	8902136 01A	8902136 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1242	8902136 01A	8902136 01B	0.40	ND	0.40	ND	ND	NC	NC
PCB-1242	8902136 03A	8902136 03B	0.43	ND	0.43	ND	ND	NC	NC
PCB-1242	8902101 01A	8902101 01B	0.020	ND	0.020	ND	ND	NC	NC
PCB-1242	8902018 22A	8902018 22B	0.41	ND	0.41	ND	ND	NC	NC
PCB-1248	8902018 22A	8902018 22B	0.41	ND	0.41	ND	ND	NC	NC
PCB-1248	8902136 01A	8902136 01B	0.40	ND	0.40	ND	ND	NC	NC
PCB-1248	8902101 01A	8902101 01B	0.020	ND	0.020	ND	ND	NC	NC
PCB-1248	8902136 03A	8902136 03B	0.43	ND	0.43	ND	ND	NC	NC
PCB-1254	8902101 01A	8902101 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1254	8902136 03A	8902136 03B	0.86	ND	0.86	ND	ND	NC	NC
PCB-1254	8902018 22A	8902018 22B	0.82	ND	0.82	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

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ATTACHMENT A 8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% RD
PCB-1254	8902136 01A	8902136 01B	0.80	ND	0.80	ND	ND	NC	NC
PCB-1260	8902136 01A	8902136 01B	0.86	ND	0.86	ND	ND	NC	NC
PCB-1260	8902018 22A	8902018 22B	0.82	ND	0.82	ND	ND	NC	NC
PCB-1260	8902101 01A	8902101 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1260	8902136 01A	8902136 01B	0.80	ND	0.80	ND	ND	NC	NC
Field duplicate									
PCB-1016	8902018 20A	8902018 21A		ND		ND	ND	NC	NC
PCB-1016	8902018 19A	8902018 22A		ND		ND	ND	NC	NC
PCB-1016	8902018 21A	8902101 01A		ND		ND	ND	NC	NC
PCB-1221	8902018 19A	8902018 22A		ND		ND	ND	NC	NC
PCB-1221	8902018 20A	8902018 21A		ND		ND	ND	NC	NC
PCB-1221	8902018 21A	8902101 01A		ND		ND	ND	NC	NC
PCB-1232	8902018 21A	8902101 01A		ND		ND	ND	NC	NC
PCB-1232	8902018 20A	8902018 21A		ND		ND	ND	NC	NC
PCB-1232	8902018 19A	8902018 22A		ND		ND	ND	NC	NC
PCB-1242	8902018 21A	8902101 01A		ND		ND	ND	NC	NC
PCB-1242	8902018 19A	8902018 22A		ND		ND	ND	NC	NC
PCB-1242	8902018 20A	8902018 21A		ND		ND	ND	NC	NC
PCB-1248	8902018 19A	8902018 22A		ND		ND	ND	NC	NC
PCB-1248	8902018 21A	8902101 01A		ND		ND	ND	NC	NC

NC: Not Calculable

ND: Not Detected

415

ATTACHMENT A 8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	3 CV
PCB-1248	8902018 20A	8902018 23A	ND	ND	ND	NC	NC
PCB-1254	8902018 19A	8902018 22A	ND	ND	ND	NC	NC
PCB-1254	8902018 20A	8902018 23A	ND	ND	ND	NC	NC
PCB-1254	8902018 21A	8902101 01A	ND	ND	ND	NC	NC
PCB-1260	8902018 21A	8902101 01A	ND	ND	ND	NC	NC
PCB-1260	8902018 19A	8902018 22A	ND	ND	ND	NC	NC
PCB-1260	8902018 20A	8902018 23A	ND	ND	ND	NC	NC
matrix duplicate							
2,4,5,6-Tetrachlorometaxylene	8902216 13A	8902216 16A	104	106	105	1.4	1.3
2,4,5,6-Tetrachlorometaxylene	8902101 06A	8902101 07A	82.0	89.0	85.5	4.9	5.8
Dibutylchlorendate	8902216 13A	8902216 16A	91.0	92.0	91.5	0.71	0.77
Dibutylchlorendate	8902101 06A	8902101 07A	108	109	109	0.71	0.65
PCB-1254	8902216 13A	8902216 16A	111	108	110	2.1	1.9
PCB-1254	8902101 06A	8902101 07A	112	124	118	8.5	7.2
9040							
field duplicate							
pH	8130-1 SWL	8131-1 SWL	12.0	12.1	12.0	0.13	1.1
pH	8130-2 SWL	8131-2 SWL	12.0	12.1	12.0	0.085	0.70
pH	8130-3 SWL	8131-3 SWL	11.8	11.5	11.7	0.24	2.1

NC: Not Calculable

ND: Not Detected

416

ATTACHMENT A 8 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, Cold Vapor									
Field duplicate									
Mercury	8902056 03D	8902056 04D	0.00020	ND	0.0020	ND	ND	NC	NC
Mercury	8902056 02D	8902056 05D	0.00020	ND	0.0020	ND	ND	NC	NC
Mercury	8902056 04D	8902108 01A	0.00020	ND	0.0020	ND	ND	NC	NC
matrix duplicate									
Mercury	8902108 04A	8902108 05A	130		140		135	7.1	5.2
Mercury	89-03-230 10	89-03-258 10a	105		107		106	1.4	1.3
Mercury	8902213 01A	8902213 04A	92.0		91.0		91.5	0.71	0.77
Mercury	89-03-258 19	89-03-258 19a	104		107		106	2.1	2.0
Mercury	89-02-055 06	89-02-055 07	75.0		72.0		73.5	2.1	2.9
Mercury	89-03-258 22	89-03-258 22a	105		105		105	0	0
Predigestion									
Mercury	8902214 01A	8902214 01A	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	8902056 03	8902056 03	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	89-02-108 01	89-02-108 01a	0.00010	ND	0.00010	ND	ND	NC	NC
Mercury	89-02-138 01a	89-02-138 01b	0.00020	ND	0.00020	ND	ND	NC	NC
D-1498									
Field duplicate									
Eh	8130-3 SWL	8131-3 SWL	-88.0		-87.0		-87.5	0.71	0.81

NC: Not Calculable
ND: Not Detected

ATTACHMENT A 8 DUPLICATE RESULTS FOR POST TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Eh	B130 2 SWL	B131 2 SWL	-102 0		-101 0		101 5	0 71	0 70
Eh	B130 1 SWL	B131 1 SWL	-70 0		-92 0		81 0	15 6	19 2
Metals, Graphite Furnace									
field duplicate									
Arsenic, graphite AA	8902056 04D	8902108 01A	0 010		0 0070	<5X	0 0085	0 0021	25 0
Arsenic, graphite AA	8902056 02D	8902056 05D	0 067		0 067		0 067	0	0
Arsenic, graphite AA	8902056 03D	8902056 06D	0 023		0 022		0 023	0 00071	3 1
Selenium, graphite AA	8902056 02D	8902056 05D	0 0040	ND	0 0040	ND	ND	NC	NC
Selenium, graphite AA	8902056 04D	8902108 01A	0 0040	ND	0 0040	ND	ND	NC	NC
Selenium, graphite AA	8902056 03D	8902056 06D	0 0040	ND	0 0040	ND	ND	NC	NC
Thallium, graphite AA	8902056 04D	8902108 01A	0 0010	ND	0 0010	ND	ND	NC	NC
Thallium, graphite AA	8902056 02D	8902056 05D	0 0010	ND	0 0010	ND	ND	NC	NC
Thallium, graphite AA	8902056 03D	8902056 06D	0 0010	ND	0 0010	ND	ND	NC	NC
matrix duplicate									
Arsenic, graphite AA	8902108 04A	8902108 05A	86 0		80 0		83 0	4 2	5 1
Arsenic, graphite AA	89-03-258 22	89-03-258 22a	54 0		58 0		56 0	2 8	5 1
Arsenic, graphite AA	8902055 06	8902055 07	88 0		90 0		89 0	1 4	1 6
Arsenic, graphite AA	8902214 09A	8902214 09A	94 0		90 0		92 0	2 8	3 1
Arsenic, graphite AA	89-02-138 01a	89-02-138 01b	66 0		66 0		66 0	0	0
Arsenic, graphite AA	8902213 03A	8902213 04A	92 0		94 0		93 0	1 4	1 5

NC: Not Calculable
ND: Not Detected

418

ATTACHMENT A.8 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Selenium, graphite AA	8902055 06	8902055 07	142	150	146	5.7	3.9
Selenium, graphite AA	89-02-138 01a	89-02-138 01b	76.0	74.0	75.0	1.4	1.9
Selenium, graphite AA	8902108 04A	8902108 05A	98.0	92.0	95.0	4.2	4.5
Selenium, graphite AA	89-03-258 10	89-03-258 10a	46.0	50.0	48.0	2.8	5.9
Selenium, graphite AA	8902213 03A	8902213 04A	74.0	70.0	72.0	2.8	3.9
Selenium, graphite AA	89-03-258 22	89-03-258 22a	60.0	58.0	59.0	1.4	2.4
Selenium, graphite AA	8902214 09A	8902214 09A	96.0	96.0	96.0	0	0
Thallium, graphite AA	8902055 06	8902055 07	50.0	54.0	52.0	2.8	5.4
Thallium, graphite AA	8902213 03A	8902213 04A	82.0	86.0	84.0	2.8	3.4
Thallium, graphite AA	8902214 09A	8902214 09A	112	110	111	1.4	1.3
Thallium, graphite AA	89-03-258 10	89-03-258 10a	62.0	62.0	62.0	0	0
Thallium, graphite AA	8902108 04A	8902108 05A	70.0	52.0	61.0	12.7	20.9
Thallium, graphite AA	89-02-138 01a	89-02-138 01b	100	96.0	98.0	2.8	2.9
Thallium, graphite AA	89-03-255 17	89-03-255 17a	70.0	66.0	68.0	2.8	4.2
Infrared Methods							
field duplicate							
Oil and grease, infrared	8902056 03A	8902056 06A	17.0	13.0	15.0	2.8	18.9
Oil and grease, infrared	8902056 04A	8902108 01D	4.3	2.8	3.6	1.1	29.9
Oil and grease, infrared	8902056 02A	8902056 05A	18.0	28.0	23.0	7.1	30.7
Total organic carbon	8902056 03C	8902056 06C	52.0	47.0	49.5	1.5	7.1
Total organic carbon	8902056 04C	8902108 01B	13.0	14.0	13.5	0.71	5.2
Total organic carbon	8902056 02C	8902056 05C	170	160	165	7.1	4.3

NC: Not Calculable.

ND: Not Detected.

416

ATTACHMENT A.8 DUPLICATE RESULTS FOR POST-TREATMENT BET LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = BET

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
matrix duplicate							
Total organic carbon	89-02-213 01b	89-02-213 01c	115	113	114	1.4	1.2
Total organic carbon	89-02-108 01	89-02-108 01a	97.0	96.0	96.5	0.71	0.73
Total organic carbon	89-02-055 05	89-02-055 05a	110	103	107	4.9	4.6
Predigestion							
Oil and grease, infrared	8902055 02	8902055 02	54.0	53.0	53.5	0.71	1.3
Oil and grease, infrared	8902056 05	8902056 05	28.4	27.5	28.0	0.64	2.3
Oil and grease, infrared	89-02-055 04	89-02-055 04a	27.0	28.0	27.5	0.71	2.6
Oil and grease, infrared	8902138 01D	8902138 01D	5.7	5.7	5.7	0	0
Total organic carbon	8902214 04B	8902214 04B	35.1	33.8	34.5	0.92	2.7
Total organic carbon	8902108 03	8902108 03	45.7	43.6	44.7	1.5	3.3
Filterable Residue (TDS)							
field duplicate							
Filterable Residue (TDS)	8902056 02B	8902056 05B	4400	4400	4400	0	0
Filterable Residue (TDS)	8902056 03B	8902056 06B	2600	2300	2450	212	8.7
Filterable Residue (TDS)	8902056 04B	8902108 01C	1200	1100	1150	70.7	6.1
Predigestion							
Filterable Residue (TDS)	8902139 03C	8902139 03C	1205	1196	1201	6.4	0.53
Filterable Residue (TDS)	89-02-108 01	89-02-108 01a	1087	1082	1084	4.0	0.37
Filterable Residue (TDS)	8902214 02C	8902214 02C	1737	1731	1734	4.2	0.24

NC: Not Calculable.
ND: Not Detected.

420

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16.1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Metals, ICPES									
field duplicate									
Aluminum, ICPES	8901269 06B	8901269 08B	0.60	<5X	0.60	<5X	0.60	0	0
Aluminum, ICPES	8901269 05B	8901269 07B	0.30	<5X	1.0		0.65	0.49	76.1
Aluminum, ICPES	8902052 02D	8902052 03D	0.50	<5X	0.50	<5X	0.50	0	0
Aluminum, ICPES	8902082 11A	8902082 12A	0.50	<5X	0.50	<5X	0.50	0	0
Aluminum, ICPES	8902258 11A	8902258 12A	0.70	<5X	0.70	<5X	0.70	0	0
Antimony, ICPES	8902258 11A	8902258 12A	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8901269 06B	8901269 08B	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8902052 02D	8902052 03D	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8901269 05B	8901269 07B	0.20	ND	0.20	ND	ND	NC	NC
Antimony, ICPES	8902082 11A	8902082 12A	0.20	ND	0.20	ND	ND	NC	NC
Barium, ICPES	8901269 06B	8901269 08B	0.36		0.35		0.36	0.0071	2.0
Barium, ICPES	8902052 02D	8902052 03D	0.38		0.37		0.38	0.0071	1.9
Barium, ICPES	8902082 11A	8902082 12A	0.41		0.40		0.41	0.0071	1.7
Barium, ICPES	8901269 05B	8901269 07B	0.34		0.32		0.33	0.014	4.3
Barium, ICPES	8902258 11A	8902258 12A	0.45		0.41		0.43	0.028	6.6
Beryllium, ICPES	8902052 02D	8902052 03D	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8902082 11A	8902082 12A	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8902258 11A	8902258 12A	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8901269 06B	8901269 08B	0.0020	ND	0.0020	ND	ND	NC	NC
Beryllium, ICPES	8901269 05B	8901269 07B	0.0020	ND	0.0020	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

ATTACHMENT A.9 DUPLICATE RESULTS FOR POST TREATMENT ANS 16.1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Cadmium, ICPES	8901269 06B	8901269 08B	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8901269 05B	8901269 07B	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8902258 11A	8902258 12A	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8902052 02D	8902052 03D	0.0050	ND	0.0050	ND	ND	NC	NC
Cadmium, ICPES	8902082 11A	8902082 12A	0.0050	ND	0.0050	ND	ND	NC	NC
Calcium, ICPES	8901269 06B	8901269 08B	99.0		95.0		97.0	2.8	2.9
Calcium, ICPES	8901269 05B	8901269 07B	99.0		88.0		93.5	7.8	8.3
Calcium, ICPES	8902052 02D	8902052 03D	100		95.0		97.5	3.5	3.6
Calcium, ICPES	8902258 11A	8902258 12A	94.0		85.0		89.5	6.4	7.1
Calcium, ICPES	8902082 11A	8902082 12A	97.0		89.0		93.0	5.7	6.1
Chromium, ICPES	8903182 33A	8903182 35A	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	8903182 34A	8903182 36A	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	8903183 17A	8903183 18A	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	8903184 25A	8903184 26A	0.030	ND	0.030	ND	ND	NC	NC
Chromium, ICPES	8903185 27A	8903185 28A	0.030	ND	0.030	ND	ND	NC	NC
Copper, ICPES	8902052 02D	8902052 03D	0.020	ND	0.020	ND	ND	NC	NC
Copper, ICPES	8901269 06B	8901269 08B	0.020	ND	0.020	ND	ND	NC	NC
Copper, ICPES	8901269 05B	8901269 07B	0.020	ND	0.020	ND	ND	NC	NC
Copper, ICPES	8902082 11A	8902082 12A	0.020	ND	0.020	ND	ND	NC	NC
Copper, ICPES	8902258 11A	8902258 12A	0.020	ND	0.020	ND	ND	NC	NC
Lead, ICPES	8901269 06B	8901269 08B	0.050	ND	0.050	ND	ND	NC	NC

NC: Not Calculable.
ND: Not Detected.

428

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Lead, ICPES	8902082 11A	8902082 12A	0 050	ND	0 050	ND	ND	NC	NC
Lead, ICPES	8902052 02D	8902052 03D	0 050	ND	0 050	ND	ND	NC	NC
Lead ICPES	8901269 05B	8901269 07B	0 050	ND	0 050	ND	ND	NC	NC
Lead, ICPES	8902258 11A	8902258 12A	0 050	ND	0 050	ND	ND	NC	NC
Nickel, ICPES	8902258 11A	8902258 12A	0 020	ND	0 020	ND	ND	NC	NC
Nickel, ICPES	8901269 06B	8901269 08B	0 020	ND	0 020	ND	ND	NC	NC
Nickel, ICPES	8902052 02D	8902052 03D	0 020	ND	0 020	ND	ND	NC	NC
Nickel, ICPES	8902082 11A	8902082 12A	0 020	ND	0 020	ND	ND	NC	NC
Nickel, ICPES	8901269 05B	8901269 07B	0 020	ND	0 020	ND	ND	NC	NC
Silver, ICPES	8902258 11A	8902258 12A	0 030	ND	0 030	ND	ND	NC	NC
Silver, ICPES	8902052 02D	8902052 03D	0 070	<5X	0 040	<5X	0 055	0 021	38 6
Silver, ICPES	8901269 06B	8901269 08B	0 030	ND	0 030	ND	ND	NC	NC
Silver, ICPES	8902082 11A	8902082 12A	0 030	ND	0 030	ND	ND	NC	NC
Silver, ICPES	8901269 05B	8901269 07B	0 030	ND	0 030	ND	ND	NC	NC
Sodium, ICPES	8902052 02D	8902052 03D	10 0		9 4		9 7	0 42	4 4
Sodium, ICPES	8901269 06B	8901269 08B	11 0		11 0		11 0	0	0
Sodium, ICPES	8901269 05B	8901269 07B	17 0		19 0		18 0	1 4	7 9
Sodium, ICPES	8902082 11A	8902082 12A	12 0		12 0		12 0	0	0
Sodium, ICPES	8902258 11A	8902258 12A	16 0		15 0		15 5	0 71	4 6
Zinc, ICPES	8902082 11A	8902082 12A	0 020	ND	0 020	ND	ND	NC	NC
Zinc, ICPES	8901269 06B	8901269 08B	0 020	ND	0 020	ND	ND	NC	NC
Zinc, ICPES	8902052 02D	8902052 03D	0 090	<5X	0 010	ND	0 050	0 057	113

NC: Not Calculable

ND: Not Detected

423

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	R CV
Zinc, ICPES	8901269 05B	8901269 07B	0.020	ND	0.020	ND	ND	NC	NC
Zinc, ICPES	8902258 11A	8902258 12A	0.020	ND	0.020	ND	ND	NC	NC
matrix duplicate									
Aluminum, ICPES	8902082 03A	8902082 04A	77.0		80.0		78.5	2.1	2.7
Aluminum, ICPES	89-03-255 14	89-03-255 14a	83.6		86.1		84.9	1.8	2.1
Aluminum, ICPES	8901268 02A	8901268 03A	95.0		96.0		95.5	0.71	0.74
Aluminum, ICPES	8902051 07A	8902051 08A	91.0		91.0		91.0	0	0
Aluminum, ICPES	8902258 04A	8902258 05A	89.0		86.0		87.5	2.1	2.4
Antimony, ICPES	8902258 04A	8902258 05A	87.0		84.0		85.5	2.1	2.5
Antimony, ICPES	89-03-255 14	89-03-255 14a	75.9		80.3		78.1	3.1	4.0
Antimony, ICPES	8901268 02A	8901268 03A	85.0		91.0		88.0	4.2	4.8
Antimony, ICPES	8902051 07A	8902051 08A	80.0		85.0		82.5	3.5	4.3
Antimony, ICPES	8902082 03A	8902082 04A	79.0		81.0		80.0	1.4	1.8
Barium, ICPES	8902082 03A	8902082 04A	75.0		81.0		78.0	4.2	5.4
Barium, ICPES	8902258 04A	8902258 05A	86.0		80.0		83.0	4.2	5.1
Barium, ICPES	8901268 02A	8901268 03A	93.0		93.0		93.0	0	0
Barium, ICPES	8902051 07A	8902051 08A	92.0		96.0		94.0	2.8	3.0
Barium, ICPES	89-03-255 14	89-03-255 14a	73.4		79.4		76.4	4.2	5.6
Beryllium, ICPES	8902051 07A	8902051 08A	94.0		94.0		94.0	0	0
Beryllium, ICPES	8902082 03A	8902082 04A	80.0		84.0		82.0	2.8	3.4
Beryllium, ICPES	89-03-255 14	89-03-255 14a	77.0		82.1		79.6	3.6	4.5
Beryllium, ICPES	8902258 04A	8902258 05A	90.0		87.0		88.5	2.1	2.4

NC: Not Calculable.
ND: Not Detected.

424

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST TREATMENT ANS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Beryllium, ICPES	8901268 02A	8901268 03A	95 0	98 0	96 5	2 1	2 2
Cadmium, ICPES	8902051 07A	8902051 08A	89 0	89 0	89 0	0	0
Cadmium, ICPES	8902258 04A	8902258 05A	90 0	88 0	89 0	1 4	1 6
Cadmium, ICPES	8901268 02A	8901268 03A	93 0	97 0	95 0	2 8	3 0
Cadmium, ICPES	8902082 03A	8902082 04A	73 0	77 0	75 0	2 8	3 8
Cadmium, ICPES	89-03-255 14	89-03-255 14a	75 3	79 3	77 3	2 8	3 3
Chromium, ICPES	8903185 05	8903185 06	86 0	86 0	86 0	0	0
Chromium, ICPES	89-03-184 16	89-03-184 17	74 0	78 0	76 0	2 8	3 3
Chromium, ICPES	89-03-185 20	89-03-185 21	88 0	85 0	86 5	2 1	2 5
Chromium, ICPES	89-03-181 14	89-03-181 15	91 0	92 0	91 5	0 71	0 77
Chromium, ICPES	89-03-182 22	89-03-182 23	92 0	96 0	94 0	2 8	3 0
Chromium, ICPES	89-03-255 14	89-03-255 14a	73 3	77 3	75 3	2 8	3 8
Copper, ICPES	8901268 02A	8901268 03A	94 0	97 0	95 5	2 1	2 2
Copper, ICPES	8902082 03A	8902082 04A	75 0	78 0	76 5	2 1	2 8
Copper, ICPES	8902258 04A	8902258 05A	89 0	86 0	87 5	2 1	2 4
Copper, ICPES	89-03-255 14	89-03-255 14a	77 8	80 9	79 4	2 2	2 8
Copper, ICPES	8902051 07A	8902051 08A	92 0	93 0	92 5	0 71	0 76
Lead, ICPES	8901268 02A	8901268 03A	97 0	100	98 5	2 1	2 1
Lead, ICPES	8902258 04A	8902258 05A	86 0	86 0	86 0	0	0
Lead, ICPES	8902082 03A	8902082 04A	76 0	79 0	77 5	2 1	3 3
Lead, ICPES	8902051 07A	8902051 08A	86 0	87 0	86 5	0 71	0 82

NC: Not Calculable
ND: Not Detected

425

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST TREATMENT AWS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = AWS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Nickel, ICPES	89-03-255 14	89-03-255 14a	74.4	77.4	75.9	2.1	2.8
Nickel, ICPES	8902258 04A	8902258 05A	89.0	86.0	87.5	2.1	2.4
Nickel, ICPES	8902082 03A	8902082 04A	75.0	79.0	77.0	2.8	3.7
Nickel, ICPES	8902051 07A	8902051 08A	89.0	91.0	90.0	1.4	1.6
Nickel, ICPES	8901268 02A	8901268 03A	90.0	96.0	93.0	4.2	4.6
Silver, ICPES	8902258 04A	8902258 05A	85.0	84.0	84.5	0.71	0.84
Silver, ICPES	8902082 03A	8902082 04A	74.0	77.0	75.5	2.1	2.8
Silver, ICPES	8902051 07A	8902051 08A	91.0	91.0	91.0	0	0
Silver, ICPES	8901268 02A	8901268 03A	86.0	90.0	88.0	2.8	3.2
Silver, ICPES	89-03-255 14	89-03-255 14a	79.0	82.0	80.5	2.1	2.6
Sodium, ICPES	8902082 03A	8902082 04A	84.0	96.0	90.0	8.5	9.4
Sodium, ICPES	8902051 07A	8902051 08A	91.0	86.0	88.5	3.5	4.0
Sodium, ICPES	8902258 04A	8902258 05A	97.0	96.0	96.5	0.71	0.73
Sodium, ICPES	8901268 02A	8901268 03A	85.0	95.0	90.0	7.1	7.9
Sodium, ICPES	89-03-255 14	89-03-255 14a	108	106	107	1.4	1.3
Zinc, ICPES	8902051 07A	8902051 08A	91.0	91.0	91.0	0	0
Zinc, ICPES	8902082 03A	8902082 04A	75.0	78.0	76.5	2.1	2.8
Zinc, ICPES	8902258 04A	8902258 05A	91.0	88.0	89.5	2.1	2.4
Zinc, ICPES	8901268 02A	8901268 03A	94.0	98.0	96.0	2.8	2.9
Zinc, ICPES	89-03-255 14	89-03-255 14a	75.9	79.6	77.8	2.6	3.3

PCBs

NC: Not Calculable
ND: Not Detected

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST TREATMENT ANS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Analytical									
PCB-1016	8902080 01A	8902080 01B	0.020	ND	0.020	ND	ND	NC	NC
PCB-1016	8901265 01A	8901265 01F	0.21	ND	0.021	ND	ND	NC	NC
PCB-1016	8901268 01E	8901268 01F	0.11	ND	0.11	ND	ND	NC	NC
PCB-1221	8901265 01A	8901265 01F	0.42	ND	0.042	ND	ND	NC	NC
PCB-1221	8901268 01E	8901268 01F	0.21	ND	0.21	ND	ND	NC	NC
PCB-1221	8902080 01A	8902080 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1232	8901265 01A	8901265 01F	0.42	ND	0.042	ND	ND	NC	NC
PCB-1232	8902080 01A	8902080 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1232	8901268 01E	8901268 01F	0.21	ND	0.21	ND	ND	NC	NC
PCB-1242	8902080 01A	8902080 01B	0.020	ND	0.020	ND	ND	NC	NC
PCB-1242	8901265 01A	8901265 01F	0.21	ND	0.021	ND	ND	NC	NC
PCB-1242	8901268 01E	8901268 01F	0.11	ND	0.11	ND	ND	NC	NC
PCB-1248	8901268 01E	8901268 01F	0.11	ND	0.11	ND	ND	NC	NC
PCB-1248	8901265 01A	8901265 01F	0.21	ND	0.021	ND	ND	NC	NC
PCB-1248	8902080 01A	8902080 01B	0.020	ND	0.020	ND	ND	NC	NC
PCB-1254	8901265 01A	8901265 01F	0.42	ND	0.042	ND	ND	NC	NC
PCB-1254	8902080 01A	8902080 01B	0.040	ND	0.040	ND	ND	NC	NC
PCB-1254	8901268 01E	8901268 01F	0.21	ND	0.21	ND	ND	NC	NC
PCB-1260	8901265 01A	8901265 01F	0.42	ND	0.042	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST TREATMENT AMS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = AMS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
PCB-1260	8901268 01E	8901268 01F	0.21	ND	0.21	ND	ND	NC	NC
PCB-1260	8902080 01A	8902080 01B	0.040	ND	0.040	ND	ND	NC	NC
field duplicate									
PCB-1016	8902247 10A	8902247 07A		ND		ND	ND	NC	NC
PCB-1016	8901269 08A	8901269 02A		ND		ND	ND	NC	NC
PCB-1016	8902018 09A	8902018 10A		ND		ND	ND	NC	NC
PCB-1016	8901269 07A	8901269 01A		ND		ND	ND	NC	NC
PCB-1016	8902080 10A	8902080 07A		ND		ND	ND	NC	NC
PCB-1221	8902247 10A	8902247 07A		ND		ND	ND	NC	NC
PCB-1221	8902018 09A	8902018 10A		ND		ND	ND	NC	NC
PCB-1221	8901269 07A	8901269 01A		ND		ND	ND	NC	NC
PCB-1221	8901269 08A	8901269 02A		ND		ND	ND	NC	NC
PCB-1221	8902080 10A	8902080 07A		ND		ND	ND	NC	NC
PCB-1232	8901269 08A	8901269 02A		ND		ND	ND	NC	NC
PCB-1232	8901269 07A	8901269 01A		ND		ND	ND	NC	NC
PCB-1232	8902247 10A	8902247 07A		ND		ND	ND	NC	NC
PCB-1232	8902018 09A	8902018 10A		ND		ND	ND	NC	NC
PCB-1232	8902080 10A	8902080 07A		ND		ND	ND	NC	NC
PCB-1242	8901269 08A	8901269 02A		ND		ND	ND	NC	NC
PCB-1242	8902018 09A	8902018 10A		ND		ND	ND	NC	NC
PCB-1242	8902080 10A	8902080 07A		ND		ND	ND	NC	NC
PCB-1242	8902247 10A	8902247 07A		ND		ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

425

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST TREATMENT ANS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
PCB-1242	8901269 07A	8901269 01A	ND	ND	ND	NC	NC
PCB-1248	8901269 08A	8901269 02A	ND	ND	ND	NC	NC
PCB-1248	8902080 10A	8902080 07A	ND	ND	ND	NC	NC
PCB-1248	8902247 10A	8902247 07A	ND	ND	ND	NC	NC
PCB-1248	8902018 09A	8902018 10A	ND	ND	ND	NC	NC
PCB-1248	8901269 07A	8901269 01A	ND	ND	ND	NC	NC
PCB-1254	8901269 07A	8901269 01A	ND	ND	ND	NC	NC
PCB-1254	8901269 08A	8901269 02A	ND	ND	ND	NC	NC
PCB-1254	8902080 10A	8902080 07A	ND	ND	ND	NC	NC
PCB-1254	8902247 10A	8902247 07A	ND	ND	ND	NC	NC
PCB-1254	8902018 09A	8902018 10A	ND	ND	ND	NC	NC
PCB-1260	8902247 10A	8902247 07A	ND	ND	ND	NC	NC
PCB-1260	8901269 08A	8901269 02A	ND	ND	ND	NC	NC
PCB-1260	8901269 07A	8901269 01A	ND	ND	ND	NC	NC
PCB-1260	8902018 09A	8902018 10A	ND	ND	ND	NC	NC
PCB-1260	8902080 10A	8902080 07A	ND	ND	ND	NC	NC
matrix duplicate							
2,4,5,6-Tetrachlorometaxylene	8902080 11A	8902080 12A	69 0	73 0	71 0	2 8	4 0
2,4,5,6 Tetrachlorometaxylene	8902018 11A	8902018 12A	81 0	94 0	87 5	9 2	10 5
2,4,5,6 Tetrachlorometaxylene	8901265 07A	8901265 08A	7 0	66 0	36 5	41 7	114
Dibutylchloroendate	8902080 11A	8902080 12A	100	112	106	8 5	8 0

NC: Not Calculable

ND: Not Detected

24

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST TREATMENT AMS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = AMS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Dibutylchloroendate	8902018 11A	8902018 12A	81 0		99 0		90 0	12 7	14 1
Dibutylchloroendate	8901265 07A	8901265 08A	8 0		85 0		46 5	56 4	117
PCB-1254	8901265 07A	8901265 08A	11 0		124		67 5	79 9	118
PCB-1254	8902018 11A	8902018 12A	85 0		90 0		87 5	3 5	4 0
PCB-1254	8902080 11A	8902080 12A	95 0		102		98 5	4 9	5 0
9040									
field duplicate									
pH	A336-5 SWL	A328A-5 SWL	11 3		11 3		11 3	0 035	0 31
pH	A336-3 SWL	A328A-3 SWL	11 2		11 2		11 2	0 021	0 19
pH	A336-2 SWL	A328A-2 SWL	11 1		11 1		11 1	0 014	0 13
pH	A336-1 SWL	A328A-1 SWL	11 0		11 1		11 1	0 071	0 64
pH	A336-4 SWL	A328A-4 SWL	10 9		10 8		10 9	0 028	0 26
Metals, Cold Vapor									
field duplicate									
Mercury	8902082 12A	8902082 09A	0 00020	ND	0 00020	ND	ND	NC	NC
Mercury	8902052 03D	8902052 04D	0 00020	ND	0 00020	ND	ND	NC	NC
Mercury	8902052 02D	8902052 03D	0 00020	ND	0 00020	ND	ND	NC	NC
Mercury	8901269 08B	8901269 07B	0 00020	ND	0 00020	ND	ND	NC	NC
Mercury	8902258 12A	8902258 09A	0 00020	ND	0 00020	ND	ND	NC	NC
Mercury	8902258 11A	8902258 12A	0 00020	ND	0 00020	ND	ND	NC	NC
Mercury	8901269 05B	8901269 07B	0 00020	ND	0 00020	ND	ND	NC	NC

NC: Not Calculable
ND: Not Detected

430

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT AMS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = AMS 16.1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Mercury	8901269 07B	8901269 01B	0.00010	ND	0.00020	<5X	0.00015	0.00007	47.1
Mercury	8902082 11A	8902082 12A	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	8901269 06B	8901269 08B	0.00020	ND	0.00020	ND	ND	NC	NC
matrix duplicate									
Mercury	8902051 07A	8902051 08A	120		118		119	1.4	1.2
Mercury	89-02-082 03	89-02-082 04	90.0		95.0		92.5	3.5	3.8
Mercury	8902258 04A	8902258 05A	95.0		95.0		95.0	0	0
Mercury	8901268 02A	8901268 03A	100		100		100	0	0
Predigestion									
Mercury	89-01-269 01	89-01-269 01a	0.00050	<5X	0.00050	<5X	0.00050	0	0
Mercury	89-01-265 01	89-01-265 01a	0.00020	ND	0.00020	ND	ND	NC	NC
Mercury	89-02-082 01	89-02-082 01a	0.00020	ND	0.00020	ND	ND	NC	NC
D-1498									
field duplicate									
Eh	A336-5 SWL	A328A-5 SWL	-68.0		-72.0		-70.0	2.8	-4.0
Eh	A336-4 SWL	A328A-4 SWL	-54.0		-47.0		-50.5	4.9	-9.8
Eh	A336-3 SWL	A328A-3 SWL	-30.0		-35.0		-32.5	3.5	-10.9
Eh	A336-2 SWL	A328A-2 SWL	-22.0		-26.0		-24.0	2.8	-11.8
Eh	A336-1 SWL	A328A-1 SWL	-20.0		-26.0		-23.0	4.2	-18.4
Metals, Graphite Furnace									

NC: Not Calculable
ND: Not Detected

431

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16 1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16 1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
field duplicate									
Arsenic, graphite AA	8901269 06B	8901269 08B	0 0020	ND	0 0020	ND	ND	NC	NC
Arsenic, graphite AA	8902258 11A	8902258 12A	0 0020	ND	0 0020	ND	ND	NC	NC
Arsenic, graphite AA	8902052 02D	8902052 03D	0 0020	ND	0 0020	ND	ND	NC	NC
Arsenic, graphite AA	8901269 05B	8901269 07B	0 0020	ND	0 0020	ND	ND	NC	NC
Arsenic, graphite AA	8902082 11A	8902082 12A	0 0020	ND	0 0020	ND	ND	NC	NC
Selenium, graphite AA	8902052 02D	8902052 03D	0 0050	ND	0 0050	ND	ND	NC	NC
Selenium, graphite AA	8902082 11A	8902082 12A	0 0040	ND	0 0040	ND	ND	NC	NC
Selenium, graphite AA	8902258 11A	8902258 12A	0 0040	ND	0 0040	ND	ND	NC	NC
Selenium, graphite AA	8901269 05B	8901269 07B	0 0040	ND	0 0040	ND	ND	NC	NC
Selenium, graphite AA	8901269 06B	8901269 08B	0 0040	ND	0 0040	ND	ND	NC	NC
Thallium, graphite AA	8901269 06B	8901269 08B	0 0020	ND	0 0020	ND	ND	NC	NC
Thallium, graphite AA	8902258 11A	8902258 12A	0 0020	ND	0 0020	ND	ND	NC	NC
Thallium, graphite AA	8901269 05B	8901269 07B	0 0020	ND	0 0020	ND	ND	NC	NC
Thallium, graphite AA	8902052 02D	8902052 03D	0 0020	ND	0 0020	ND	ND	NC	NC
Thallium, graphite AA	8902082 11A	8902082 12A	0 0010	ND	0 0010	ND	ND	NC	NC
matrix duplicate									
Arsenic, graphite AA	8902258 04A	8902258 05A	80 0		82 0		81 0	1 4	1 7
Arsenic, graphite AA	8902082 03A	8902082 04A	82 0		84 0		83 0	1 4	1 7
Arsenic, graphite AA	8901268 02A	8901268 03A	98 0		96 0		97 0	1 4	1 5
Arsenic, graphite AA	8902051 07A	8902051 08A	94 0		94 0		94 0	0	0
Lead, graphite AA	89-03-255 04	89-03-255 04a	42 0		42 0		42 0	0	0

NC: Not Calculable

ND: Not Detected

432

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16.1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
Selenium, graphite AA	8902082 03A	8902082 04A	94.0		96.0		95.0	1.4	1.5
Selenium, graphite AA	8901268 02A	8901268 03A	118		120		119	1.4	1.2
Selenium, graphite AA	8902051 07A	8902051 08A	100		100		100	0	0
Selenium, graphite AA	8902258 04A	8902258 05A	90.0		88.0		89.0	1.4	1.6
Thallium, graphite AA	8902051 07A	8902051 08A	82.0		86.0		84.0	2.8	3.4
Thallium, graphite AA	89-03-255 14	89-03-255 14a	72.0		78.0		75.0	4.2	5.7
Thallium, graphite AA	8901268 02A	8901268 03A	84.0		90.0		87.0	4.2	4.9
Thallium, graphite AA	8902082 03A	8902082 04A	74.0		78.0		76.0	2.8	3.7
Thallium, graphite AA	8902258 04A	8902258 05A	80.0		82.0		81.0	1.4	1.7
Infrared Methods									
field duplicate									
Oil and grease, infrared	8902258 11D	8902258 12D	0.40	ND	0.40	ND	ND	NC	NC
Oil and grease, infrared	8901269 06E	8901269 08E	0.40	ND	0.40	ND	ND	NC	NC
Oil and grease, infrared	8902052 02A	8902052 03A	0.40	ND	0.40	ND	ND	NC	NC
Oil and grease, infrared	8902082 11C	8902082 12C	0.40	ND	0.50	ND	ND	NC	NC
Oil and grease, infrared	8901269 05E	8901269 07E	0.40	ND	0.40	ND	ND	NC	NC
Total organic carbon	8902258 11B	8902258 12B	6.0		6.0		6.0	0	0
Total organic carbon	8902052 02C	8902052 03C	6.0		5.0		5.5	0.71	12.9
Total organic carbon	8901269 05C	8901269 07C	6.3		6.2		6.3	0.071	1.1
Total organic carbon	8901269 06C	8901269 08C	5.0		5.9		5.5	0.64	11.7
Total organic carbon	8902082 11B	8902082 12B	5.0		6.0		5.5	0.71	12.9

NC: Not Calculable.

ND: Not Detected.

433

ATTACHMENT A 9 DUPLICATE RESULTS FOR POST-TREATMENT AMS 16.1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = AMS 16.1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value		Duplicate Value		Mean Concentration	Standard Deviation	% CV
matrix duplicate									
Total organic carbon	89-02-258 02b	89-02-258 02c	102		99.2		101	2.0	2.0
Total organic carbon	89-02-082 03	89-02-082 04	92.0		92.0		92.0	0	0
Total organic carbon	89-01-268 06	89-01-268 06a	92.0		89.0		90.5	2.1	2.3
Total organic carbon	89-02-051 01	89-02-051 01a	90.0		87.0		88.5	2.1	2.4
Total organic carbon	89-01-265 02	89-01-265 02a	93.0		90.0		91.5	2.1	2.3
Predigestion									
Oil and grease, infrared	89-02-082 05	89-02-082 05a	1.5	<5X	1.4	<5X	1.5	0.085	5.8
Oil and grease, infrared	89-02-052 01	89-02-051 01a	2.1		2.1		2.1	0	0
Oil and grease, infrared	89-02-258 11d	89-02-258 11e	0.40	ND	0.40	ND	ND	NC	NC
Total organic carbon	89-02-051 02	89-02-051 02a	13.0		12.0		12.5	0.71	5.7
Total organic carbon	89-01-265 01	89-01-265 01a	13.0		13.0		13.0	0	0
Total organic carbon	89-01-268 05	89-01-268 05a	7.1		6.5		6.8	0.42	6.2
Total organic carbon	89-02-082 02	89-02-082 02a	15.7		14.4		15.1	0.92	6.1
Total organic carbon	89-02-258 02b	89-02-258 02c	20.2		19.8		20.0	0.28	1.4
Total organic carbon	89-02-051 01	8902051 01	13.0		13.0		13.0	0	0
Filterable Residue (TDS)									
field duplicate									
Filterable Residue (TDS)	8902082 12D	8902082 09D	340		320		330	14.1	4.3
Filterable Residue (TDS)	8902258 12C	8902258 09C	330		310		320	14.1	4.4
Filterable Residue (TDS)	8902052 03B	8902052 04B	320		320		320	0	0

NC: Not Calculable.
ND: Not Detected.

434

ATTACHMENT A.9 DUPLICATE RESULTS FOR POST-TREATMENT ANS 16.1 LEACHATES

LAB DUPLICATE (SAMPLES OR ANALYSES) FOR MATRIX = Treated, SUBMATRIX = ANS 16.1

Parameter	Routine Sample ID	Duplicate Sample ID	Routine Value	Duplicate Value	Mean Concentration	Standard Deviation	% CV
Filterable Residue (TDS)	8902082 11D	8902082 12D	380	340	360	28.3	7.9
Filterable Residue (TDS)	8902052 02B	8902052 03B	350	320	335	21.2	6.3
Filterable Residue (TDS)	8901269 05D	8901269 07D	410	380	395	21.2	5.4
Filterable Residue (TDS)	8902258 11C	8902258 12C	360	330	345	21.2	6.1
Filterable Residue (TDS)	8901269 08D	8901269 02D	310	300	305	7.1	2.3
Filterable Residue (TDS)	8901269 06D	8901269 08D	330	310	320	14.1	4.4
Predigestion							
Filterable Residue (TDS)	89-01-265 01	89-01-265 01a	620	600	610	14.1	2.3
Filterable Residue (TDS)	89-02-258 01c	89-02-258 01d	894	868	881	18.4	2.1
Filterable Residue (TDS)	89-01-265 04	89-01-265 04	610	590	600	14.1	2.4
Filterable Residue (TDS)	89-01-269 01	89-01-269 01a	360	360	360	0	0
Filterable Residue (TDS)	89-02-082 08	89-02-082 08a	195	194	195	0.71	0.36
Filterable Residue (TDS)	89-01-265 02	89-01-265 02a	580	590	585	7.1	1.2

NC: Not Calculable.
ND: Not Detected.

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result		Spiked Sample Result		Spike Added	% Recovery
Metals, ICPES							
04-Apr-89 T T m	Aluminum, ICPES	ND	0.20		9.06	10.0	90.60
04-Apr-89 T T m	Aluminum, ICPES	<5X	0.77		10.0	10.0	92.30
Number of Samples = 76				Below acceptance = 7			
Mean % Recovery = 92				Above acceptance = 3			
Standard Deviation = 26.31				Acceptance Criteria 80.00 - 120.00			
09-Jan-89 P b	Antimony, ICPES	ND	0.20	ND	0.20	0.050	0.00
26-Jan-89 P b	Antimony, ICPES	ND	0.20		0.88	1.00	88.30
09-Jan-89 P m	Antimony, ICPES	ND	9.80	<5X	11.0	2.38	462.18
09-Jan-89 P m	Antimony, ICPES	ND	9.38		17.9	23.2	77.16
09-Jan-89 P m	Antimony, ICPES	ND	9.38		19.3	24.2	79.75
09-Jan-89 P m	Antimony, ICPES	ND	9.80	<5X	10.6	2.46	430.89
17-Jan-89 P B b	Antimony, ICPES	ND	0.20		0.95	1.00	95.00
25-Jan-89 P B b	Antimony, ICPES	ND	0.20		1.00	1.00	100.00
04-Apr-89 P B b	Antimony, ICPES	ND	0.20		0.90	1.00	89.50
25-Jan-89 P B m	Antimony, ICPES	ND	0.20		0.86	1.00	86.00
25-Jan-89 P B m	Antimony, ICPES	ND	0.20		0.84	1.00	84.00
04-Apr-89 P B m	Antimony, ICPES	ND	0.20		0.88	1.00	87.70
04-Apr-89 P B m	Antimony, ICPES	ND	0.20		0.93	1.00	92.50
20-Jan-89 P T b	Antimony, ICPES	ND	0.20		0.92	1.00	92.00
23-Jan-89 P T b	Antimony, ICPES	ND	0.20	<5X	0.92	1.00	92.00
04-Apr-89 P T b	Antimony, ICPES	ND	0.20		1.00	1.00	100.00
23-Jan-89 P T m	Antimony, ICPES	ND	0.20	<5X	0.82	1.00	82.00
23-Jan-89 P T m	Antimony, ICPES	ND	0.20	<5X	0.83	1.00	83.00
04-Apr-89 P T m	Antimony, ICPES	ND	0.20		0.99	1.00	98.50
04-Apr-89 P T m	Antimony, ICPES	ND	0.20		0.96	1.00	96.20
27-Jan-89 T b	Antimony, ICPES	ND	0.20	<5X	0.44	0.50	88.00
27-Jan-89 T m	Antimony, ICPES	ND	98.0	ND	96.0	25.0	0.00
27-Jan-89 T m	Antimony, ICPES	ND	98.0	ND	96.0	25.0	0.00
07-Feb-89 T A b	Antimony, ICPES	ND	0.20	<5X	0.91	1.00	91.00
07-Feb-89 T A b	Antimony, ICPES	ND	0.20	<5X	0.89	1.00	89.00
04-Mar-89 T A b	Antimony, ICPES	ND	0.20		0.94	1.00	93.90
07-Mar-89 T A b	Antimony, ICPES	ND	0.20	<5X	0.93	1.00	92.50
12-Apr-89 T A b	Antimony, ICPES	ND	0.20		0.93	1.00	93.10
06-Feb-89 T A m	Antimony, ICPES	ND	0.20	<5X	0.85	1.00	85.00
06-Feb-89 T A m	Antimony, ICPES	ND	0.20	<5X	0.91	1.00	91.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result			Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES							
07-Feb-89 T A m	Antimony, ICPES	ND	0.20	<5X	0.87	1.00	87.00
07-Feb-89 T A m	Antimony, ICPES	ND	0.20	<5X	0.85	1.00	85.00
04-Mar-89 T A m	Antimony, ICPES	ND	0.20		0.87	1.00	86.80
04-Mar-89 T A m	Antimony, ICPES	ND	0.20		0.84	1.00	84.40
08-Mar-89 T A m	Antimony, ICPES	ND	0.20		0.81	1.00	80.60
08-Mar-89 T A m	Antimony, ICPES	ND	0.20		0.79	1.00	79.30
04-Apr-89 T A m	Antimony, ICPES	ND	0.20		0.80	1.00	80.30
04-Apr-89 T A m	Antimony, ICPES	ND	0.20		0.76	1.00	75.90
10-Feb-89 T B b	Antimony, ICPES	ND	0.20	<5X	0.86	1.00	85.90
22-Feb-89 T B b	Antimony, ICPES	ND	0.20	<5X	0.81	1.00	81.10
07-Feb-89 T B m	Antimony, ICPES	ND	0.20	<5X	0.84	1.00	84.00
07-Feb-89 T B m	Antimony, ICPES	ND	0.20	<5X	0.84	1.00	84.00
10-Feb-89 T B m	Antimony, ICPES	ND	0.20	<5X	0.85	1.00	84.90
10-Feb-89 T B m	Antimony, ICPES	ND	0.20	<5X	0.83	1.00	83.20
23-Feb-89 T B m	Antimony, ICPES	ND	0.20		0.79	1.00	79.00
23-Feb-89 T B m	Antimony, ICPES	ND	0.20		0.82	1.00	82.00
27-Feb-89 T B m	Antimony, ICPES	ND	0.20		0.97	1.00	96.60
27-Feb-89 T B m	Antimony, ICPES	ND	0.20		0.93	1.00	92.60
04-Mar-89 T B m	Antimony, ICPES	ND	0.20		0.93	1.00	93.10
04-Mar-89 T B m	Antimony, ICPES	ND	0.20		0.87	1.00	87.20
04-Mar-89 T B m	Antimony, ICPES	ND	0.20		0.91	1.00	91.40
04-Mar-89 T B m	Antimony, ICPES	ND	0.20		0.85	1.00	85.20
08-Mar-89 T B m	Antimony, ICPES	ND	0.20	<5X	0.79	1.00	79.40
08-Mar-89 T B m	Antimony, ICPES	ND	0.20	<5X	0.82	1.00	82.00
04-Apr-89 T B m	Antimony, ICPES	ND	0.20		0.80	1.00	80.30
04-Apr-89 T B m	Antimony, ICPES	ND	0.20		0.82	1.00	81.80
21-Feb-89 T E b	Antimony, ICPES	ND	0.20		0.95	1.00	95.00
21-Feb-89 T E b	Antimony, ICPES	ND	0.20		0.95	1.00	95.00
21-Feb-89 T E b	Antimony, ICPES	ND	0.20		0.89	1.00	89.00
21-Feb-89 T E m	Antimony, ICPES	ND	0.20		0.88	1.00	88.00
21-Feb-89 T E m	Antimony, ICPES	ND	0.20		0.86	1.00	86.00
21-Feb-89 T E m	Antimony, ICPES	ND	0.20		0.87	1.00	87.00
04-Apr-89 T E m	Antimony, ICPES	ND	0.20		0.77	1.00	76.90
04-Apr-89 T E m	Antimony, ICPES	ND	0.20		0.79	1.00	78.80
04-Apr-89 T E m	Antimony, ICPES	ND	0.20		0.78	1.00	77.50
04-Apr-89 T E m	Antimony, ICPES	ND	0.20		0.78	1.00	77.70
07-Feb-89 T T b	Antimony, ICPES	ND	0.20	<5X	0.88	1.00	88.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 1c 1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result		Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES						
04-Apr-89 T T b	Antimony, ICPES	ND 0.20		0.92	1.00	91.90
07-Feb-89 T T m	Antimony, ICPES	ND 0.20	<5x	0.78	1.00	78.00
07-Feb-89 T T m	Antimony, ICPES	ND 0.20	<5x	0.88	1.00	88.00
07-Feb-89 T T m	Antimony, ICPES	ND 0.20	<5x	0.89	1.00	89.00
07-Feb-89 T T m	Antimony, ICPES	ND 0.20	<5x	0.82	1.00	82.00
04-Apr-89 T T m	Antimony, ICPES	ND 0.20		0.80	1.00	79.80
04-Apr-89 T T m	Antimony, ICPES	ND 0.20		0.74	1.00	73.60
04-Apr-89 T T m	Antimony, ICPES	ND 0.20		0.80	1.00	79.80
04-Apr-89 T T m	Antimony, ICPES	ND 0.20		0.75	1.00	74.50
Number of Samples = 76				Below acceptance = 18		
Mean % Recovery = 92				Above acceptance = 2		
Standard Deviation = 61.37				Acceptance Criteria 80.00 - 120.00		
09-Jan-89 P b	Arsenic, ICPES	ND 0.30		0.88	1.00	87.50
09-Jan-89 P m	Arsenic, ICPES	116.0		163.0	49.3	95.33
09-Jan-89 P m	Arsenic, ICPES	116.0		160.0	47.6	92.44
27-Jan-89 T b	Arsenic, ICPES	ND 0.30	<5x	0.93	1.00	93.00
27-Jan-89 T m	Arsenic, ICPES	52.0		90.0	50.0	76.00
27-Jan-89 T m	Arsenic, ICPES	52.0		89.0	49.0	75.51
Number of Samples = 6				Below acceptance = 2		
Mean % Recovery = 86				Above acceptance = 0		
Standard Deviation = 8.80				Acceptance Criteria 80.00 - 120.00		
09-Jan-89 P b	Barium, ICPES	ND 0.010		0.16	0.20	81.00
26-Jan-89 P b	Barium, ICPES	ND 0.010		10.3	11.0	93.64
09-Jan-89 P m	Barium, ICPES	694.0		725.0	9.52	325.63
09-Jan-89 P m	Barium, ICPES	694.0		714.0	9.86	202.84
26-Jan-89 P m	Barium, ICPES	725.0		1130	483.0	83.85
26-Jan-89 P m	Barium, ICPES	725.0		1140	463.0	89.63
17-Jan-89 P B b	Barium, ICPES	ND 0.010		0.86	1.00	86.00
25-Jan-89 P B b	Barium, ICPES	ND 0.010		0.88	1.00	88.00
04-Apr-89 P B b	Barium, ICPES	ND 0.010		0.90	1.00	90.20
25-Jan-89 P B m	Barium, ICPES	0.38		1.20	1.00	82.00
25-Jan-89 P B m	Barium, ICPES	0.38		1.20	1.00	82.00
04-Apr-89 P B m	Barium, ICPES	0.42		1.31	1.00	88.60

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Apr-89 P B m Barium, ICPES		0.42	1.31	1.00	88.60
23-Jan-89 P T b Barium, ICPES		ND 0.010	1.10	1.00	110.00
04-Apr-89 P T b Barium, ICPES		ND 0.010	1.10	1.00	110.00
23-Jan-89 P T m Barium, ICPES		1.50	4.20	1.00	270.00
23-Jan-89 P T m Barium, ICPES		1.50	4.30	1.00	280.00
04-Apr-89 P T m Barium, ICPES		1.54	4.53	1.00	299.00
04-Apr-89 P T m Barium, ICPES		1.54	4.53	1.00	299.00
27-Jan-89 T b Barium, ICPES		ND 0.010	9.10	10.0	91.00
27-Jan-89 T m Barium, ICPES		580.0	960.0	490.0	77.55
27-Jan-89 T m Barium, ICPES		580.0	970.0	500.0	78.00
07-Feb-89 T A b Barium, ICPES		ND 0.010	0.98	1.00	98.00
07-Feb-89 T A b Barium, ICPES		ND 0.010	0.91	1.00	91.00
04-Mar-89 T A b Barium, ICPES		ND 0.010	0.88	1.00	88.20
07-Mar-89 T A b Barium, ICPES		ND 0.010	0.86	1.00	86.40
12-Apr-89 T A b Barium, ICPES		ND 0.010	0.86	1.00	86.30
06-Feb-89 T A m Barium, ICPES		0.017	1.10	1.00	108.30
06-Feb-89 T A m Barium, ICPES		0.017	1.10	1.00	108.30
07-Feb-89 T A m Barium, ICPES		0.14	1.10	1.00	96.00
07-Feb-89 T A m Barium, ICPES		0.14	1.10	1.00	96.00
04-Mar-89 T A m Barium, ICPES		0.89	1.69	1.00	80.00
04-Mar-89 T A m Barium, ICPES		0.89	1.75	1.00	86.00
08-Mar-89 T A m Barium, ICPES		0.62	1.43	1.00	80.70
08-Mar-89 T A m Barium, ICPES		0.62	1.37	1.00	74.70
04-Apr-89 T A m Barium, ICPES		0.62	1.35	1.00	73.40
04-Apr-89 T A m Barium, ICPES		0.62	1.41	1.00	79.40
10-Feb-89 T B b Barium, ICPES		ND 0.10	0.91	1.00	91.00
22-Feb-89 T B b Barium, ICPES		ND 0.10	0.85	1.00	84.50
07-Feb-89 T B m Barium, ICPES		5.70	6.50	1.00	80.00
07-Feb-89 T B m Barium, ICPES		5.70	6.50	1.00	80.00
10-Feb-89 T B m Barium, ICPES		1.43	2.27	1.00	84.50
10-Feb-89 T B m Barium, ICPES		1.43	2.30	1.00	87.30
22-Feb-89 T B m Barium, ICPES		3.41	4.51	1.00	110.00
22-Feb-89 T B m Barium, ICPES		3.41	4.48	1.00	107.00
27-Feb-89 T B m Barium, ICPES		ND 0.10	0.91	1.00	91.10
27-Feb-89 T B m Barium, ICPES		4.38	5.49	1.00	111.00
27-Feb-89 T B m Barium, ICPES		4.38	5.34	1.00	96.00
04-Mar-89 T B m Barium, ICPES		9.10	9.98	1.00	88.00

NC: Not Calculable

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Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Mar-89 T B m	Barium, ICPES	9.10	9.97	1.00	87.00
04-Mar-89 T B m	Barium, ICPES	1.58	2.49	1.00	91.00
04-Mar-89 T B m	Barium, ICPES	1.58	2.50	1.00	92.00
04-Apr-89 T B m	Barium, ICPES	3.30	4.25	1.00	95.00
04-Apr-89 T B m	Barium, ICPES	3.30	4.18	1.00	88.00
21-Feb-89 T E b	Barium, ICPES	0.010	0.91	1.00	90.40
21-Feb-89 T E m	Barium, ICPES	1.04	2.31	1.00	87.00
21-Feb-89 T E m	Barium, ICPES	2.57	3.53	1.00	96.00
21-Feb-89 T E m	Barium, ICPES	2.57	3.48	1.00	91.00
21-Feb-89 T E m	Barium, ICPES	1.44	2.27	1.00	83.00
04-Apr-89 T E m	Barium, ICPES	1.43	2.33	1.00	90.00
04-Apr-89 T E m	Barium, ICPES	2.62	3.44	1.00	82.00
04-Apr-89 T E m	Barium, ICPES	2.62	3.53	1.00	91.00
04-Apr-89 T E m	Barium, ICPES	1.43	2.29	1.00	86.00
07-Feb-89 T T b	Barium, ICPES	ND 0.010	0.92	1.00	92.00
04-Apr-89 T T b	Barium, ICPES	ND 0.010	0.92	1.00	92.40
07-Feb-89 T T m	Barium, ICPES	0.97	1.90	1.00	93.00
07-Feb-89 T T m	Barium, ICPES	0.97	1.80	1.00	83.00
07-Feb-89 T T m	Barium, ICPES	5.00	5.80	1.00	80.00
07-Feb-89 T T m	Barium, ICPES	5.00	5.90	1.00	90.00
04-Apr-89 T T m	Barium, ICPES	5.10	6.03	1.00	93.00
04-Apr-89 T T m	Barium, ICPES	1.00	1.93	1.00	93.40
04-Apr-89 T T m	Barium, ICPES	5.10	5.98	1.00	88.00
04-Apr-89 T T m	Barium, ICPES	1.00	1.89	1.00	89.40

Number of Samples = 73 Below acceptance = 5
Mean % Recovery = 105 Above acceptance = 6
Standard Deviation = 54.26 Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Beryllium, ICPES	ND 0.0030	0.0090	0.010	90.00
09-Jan-89 P m	Beryllium, ICPES	<5X 0.27	0.68	0.48	86.76
09-Jan-89 P m	Beryllium, ICPES	<5X 0.27	0.71	0.49	88.64
17-Jan-89 P B b	Beryllium, ICPES	ND 0.0020	0.92	1.00	92.00
25-Jan-89 P B b	Beryllium, ICPES	ND 0.0020	0.93	1.00	93.00
04-Apr-89 P B b	Beryllium, ICPES	ND 0.0020	0.93	1.00	93.10
25-Jan-89 P B m	Beryllium, ICPES	ND 0.0020	0.84	1.00	84.00
25-Jan-89 P B m	Beryllium, ICPES	ND 0.0020	0.84	1.00	84.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Apr-89 P B m	Beryllium, ICPES	ND 0.0020	0.90	1.00	89.80
04-Apr-89 P B m	Beryllium, ICPES	ND 0.0020	0.90	1.00	89.90
23-Jan-89 P T b	Beryllium, ICPES	ND 0.0020	1.20	1.00	120.00
04-Apr-89 P T b	Beryllium, ICPES	ND 0.0020	1.13	1.00	113.00
23-Jan-89 P T m	Beryllium, ICPES	ND 0.0020	1.10	1.00	110.00
23-Jan-89 P T m	Beryllium, ICPES	ND 0.0020	1.10	1.00	110.00
04-Apr-89 P T m	Beryllium, ICPES	ND 0.0020	1.12	1.00	112.00
04-Apr-89 P T m	Beryllium, ICPES	ND 0.0020	1.12	1.00	112.00
27-Jan-89 T b	Beryllium, ICPES	ND 0.0020	0.0090	0.010	90.00
27-Jan-89 T m	Beryllium, ICPES	<5X 0.12	0.54	0.49	85.71
27-Jan-89 T m	Beryllium, ICPES	<5X 0.12	0.51	0.50	78.00
07-Feb-89 T A b	Beryllium, ICPES	ND 0.0020	0.93	1.00	93.00
07-Feb-89 T A b	Beryllium, ICPES	ND 0.0020	0.99	1.00	99.00
07-Mar-89 T A b	Beryllium, ICPES	ND 0.0020	0.91	1.00	90.60
12-Apr-89 T A b	Beryllium, ICPES	ND 0.0020	0.92	1.00	92.30
06-Feb-89 T A m	Beryllium, ICPES	ND 0.0020	0.98	1.00	98.00
06-Feb-89 T A m	Beryllium, ICPES	ND 0.0020	0.95	1.00	95.00
07-Feb-89 T A m	Beryllium, ICPES	ND 0.0020	0.94	1.00	94.00
07-Feb-89 T A m	Beryllium, ICPES	ND 0.0020	0.94	1.00	94.00
04-Mar-89 T A m	Beryllium, ICPES	ND 0.0020	0.87	1.00	82.40
04-Mar-89 T A m	Beryllium, ICPES	ND 0.0020	0.91	1.00	90.50
08-Mar-89 T A m	Beryllium, ICPES	ND 0.0020	0.80	1.00	80.40
08-Mar-89 T A m	Beryllium, ICPES	ND 0.0020	0.85	1.00	84.50
04-Apr-89 T A m	Beryllium, ICPES	ND 0.0020	0.82	1.00	82.10
04-Apr-89 T A m	Beryllium, ICPES	ND 0.0020	0.77	1.00	77.00
10-Feb-89 T B b	Beryllium, ICPES	ND 0.0020	0.92	1.00	92.40
22-Feb-89 T B b	Beryllium, ICPES	ND 0.10	0.85	1.00	84.70
07-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
07-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
10-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.90	1.00	90.10
10-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.91	1.00	91.10
23-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.89	1.00	89.00
23-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.89	1.00	89.00
27-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.93	1.00	92.50
27-Feb-89 T B m	Beryllium, ICPES	ND 0.0020	0.94	1.00	94.40
06-Mar-89 T B m	Beryllium, ICPES	ND 0.0020	0.88	1.00	87.60
04-Mar-89 T B m	Beryllium, ICPES	ND 0.0020	0.95	1.00	94.50

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Mar-89 T B m	Beryllium, ICPES	ND 0.0020	0.88	1.00	87.80
04-Mar-89 T B m	Beryllium, ICPES	ND 0.0020	0.94	1.00	94.40
04-Apr-89 T B m	Beryllium, ICPES	ND 0.0020	0.82	1.00	82.40
04-Apr-89 T B m	Beryllium, ICPES	ND 0.0020	0.83	1.00	83.30
21-Feb-89 T E b	Beryllium, ICPES	ND 0.0020	0.93	1.00	93.00
21-Feb-89 T E m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
21-Feb-89 T E m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
21-Feb-89 T E m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
21-Feb-89 T E m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
04-Apr-89 T E m	Beryllium, ICPES	ND 0.0020	0.79	1.00	79.40
04-Apr-89 T E m	Beryllium, ICPES	ND 0.0020	0.80	1.00	79.70
04-Apr-89 T E m	Beryllium, ICPES	ND 0.0020	0.81	1.00	81.10
04-Apr-89 T E m	Beryllium, ICPES	ND 0.0020	0.80	1.00	80.30
07-Feb-89 T T b	Beryllium, ICPES	ND 0.0020	0.92	1.00	92.00
04-Apr-89 T T b	Beryllium, ICPES	ND 0.0020	0.94	1.00	94.30
07-Feb-89 T T m	Beryllium, ICPES	ND 0.0020	0.88	1.00	88.00
07-Feb-89 T T m	Beryllium, ICPES	ND 0.0020	0.90	1.00	90.00
07-Feb-89 T T m	Beryllium, ICPES	ND 0.0020	0.89	1.00	89.00
07-Feb-89 T T m	Beryllium, ICPES	ND 0.0020	0.86	1.00	86.00
04-Apr-89 T T m	Beryllium, ICPES	ND 0.0020	0.84	1.00	84.20
04-Apr-89 T T m	Beryllium, ICPES	ND 0.0020	0.86	1.00	85.80
04-Apr-89 T T m	Beryllium, ICPES	ND 0.0020	0.83	1.00	82.60
04-Apr-89 T T m	Beryllium, ICPES	ND 0.0020	0.85	1.00	85.00

Number of Samples = 68 — Below acceptance = 4
Mean % Recovery = 90 — Above acceptance = 0
Standard Deviation = 8.50 — Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Cadmium, ICPES	ND 0.0050	0.052	0.050	104.00
09-Jan-89 P m	Cadmium, ICPES	1.70	4.33	2.38	110.50
09-Jan-89 P m	Cadmium, ICPES	1.70	4.21	2.46	102.03
15-Mar-89 P m	Cadmium, ICPES	<5x 0.49	396.0	458.0	86.36
15-Mar-89 P m	Cadmium, ICPES	<5x 0.49	387.0	438.0	88.24
17-Jan-89 P B b	Cadmium, ICPES	ND 0.0050	0.90	1.00	90.00
25-Jan-89 P B b	Cadmium, ICPES	ND 0.0050	0.86	1.00	86.00
04-Apr-89 P B b	Cadmium, ICPES	ND 0.0050	0.90	1.00	90.00
25-Jan-89 P B m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
25-Jan-89 P B m	Cadmium, ICPES	ND 0.0050	0.79	1.00	79.00
04-Apr-89 P B m	Cadmium, ICPES	ND 0.0050	0.86	1.00	85.60
04-Apr-89 P B m	Cadmium, ICPES	ND 0.0050	0.86	1.00	85.70
23-Jan-89 P T b	Cadmium, ICPES	ND 0.0050	1.10	1.00	110.00
04-Apr-89 P T b	Cadmium, ICPES	ND 0.0050	1.10	1.00	110.00
23-Jan-89 P T m	Cadmium, ICPES	ND 0.0050	1.00	1.00	100.00
23-Jan-89 P T m	Cadmium, ICPES	ND 0.0050	0.98	1.00	98.00
04-Apr-89 P T m	Cadmium, ICPES	ND 0.0050	1.13	1.00	113.00
04-Apr-89 P T m	Cadmium, ICPES	ND 0.0050	1.12	1.00	112.00
27-Jan-89 T b	Cadmium, ICPES	ND 0.0050	0.040	0.050	80.00
27-Jan-89 T m	Cadmium, ICPES	<5X 0.80	2.50	2.40	70.83
27-Jan-89 T m	Cadmium, ICPES	<5X 0.80	2.40	2.50	64.00
15-Mar-89 T m	Cadmium, ICPES	<5X 0.52	421.0	485.0	86.70
15-Mar-89 T m	Cadmium, ICPES	<5X 0.52	363.0	410.0	88.41
07-Feb-89 T A b	Cadmium, ICPES	ND 0.0050	0.98	1.00	98.00
07-Feb-89 T A b	Cadmium, ICPES	ND 0.0050	0.90	1.00	90.00
07-Mar-89 T A b	Cadmium, ICPES	ND 0.0050	0.83	1.00	82.80
12-Apr-89 T A b	Cadmium, ICPES	ND 0.0050	0.87	1.00	86.80
06-Feb-89 T A m	Cadmium, ICPES	ND 0.0050	0.93	1.00	93.00
06-Feb-89 T A m	Cadmium, ICPES	ND 0.0050	0.97	1.00	97.00
07-Feb-89 T A m	Cadmium, ICPES	ND 0.0050	0.89	1.00	89.00
07-Feb-89 T A m	Cadmium, ICPES	ND 0.0050	0.89	1.00	89.00
04-Mar-89 T A m	Cadmium, ICPES	ND 0.0050	0.90	1.00	89.50
04-Mar-89 T A m	Cadmium, ICPES	ND 0.0050	0.88	1.00	87.50
08-Mar-89 T A m	Cadmium, ICPES	ND 0.0050	0.73	1.00	73.40
08-Mar-89 T A m	Cadmium, ICPES	ND 0.0050	0.77	1.00	77.00
04-Apr-89 T A m	Cadmium, ICPES	ND 0.0050	0.75	1.00	75.30
04-Apr-89 T A m	Cadmium, ICPES	ND 0.0050	0.79	1.00	79.30
10-Feb-89 T B b	Cadmium, ICPES	ND 0.0050	0.90	1.00	89.80
22-Feb-89 T B b	Cadmium, ICPES	ND 0.0050	0.84	1.00	84.10
07-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00
07-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.81	1.00	81.00
10-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.85	1.00	85.00
10-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.84	1.00	84.40
22-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.86	1.00	86.00
22-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.85	1.00	85.00
27-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.93	1.00	93.10

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
27-Feb-89 T B m	Cadmium, ICPES	ND 0.0050	0.92	1.00	91.90
04-Mar-89 T B m	Cadmium, ICPES	ND 0.0050	0.94	1.00	93.60
04-Mar-89 T B m	Cadmium, ICPES	ND 0.0050	0.94	1.00	93.70
04-Mar-89 T B m	Cadmium, ICPES	ND 0.0050	0.89	1.00	89.30
04-Mar-89 T B m	Cadmium, ICPES	ND 0.0050	0.90	1.00	89.60
04-Apr-89 T B m	Cadmium, ICPES	ND 0.0050	0.84	1.00	83.80
04-Apr-89 T B m	Cadmium, ICPES	ND 0.0050	0.84	1.00	84.40
21-Feb-89 T E b	Cadmium, ICPES	ND 0.0050	0.90	1.00	90.00
21-Feb-89 T E m	Cadmium, ICPES	ND 0.0050	0.79	1.00	79.00
21-Feb-89 T E m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00
21-Feb-89 T E m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00
21-Feb-89 T E m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00
04-Apr-89 T E m	Cadmium, ICPES	ND 0.0050	0.85	1.00	84.60
04-Apr-89 T E m	Cadmium, ICPES	ND 0.0050	0.84	1.00	84.10
04-Apr-89 T E m	Cadmium, ICPES	ND 0.0050	0.86	1.00	86.00
04-Apr-89 T E m	Cadmium, ICPES	ND 0.0050	0.84	1.00	84.40
07-Feb-89 T T b	Cadmium, ICPES	ND 0.0050	0.90	1.00	90.00
07-Feb-89 T T b	Cadmium, ICPES	ND 0.0050	0.91	1.00	91.00
04-Apr-89 T T b	Cadmium, ICPES	ND 0.0050	0.92	1.00	91.70
07-Feb-89 T T m	Cadmium, ICPES	ND 0.0050	0.81	1.00	81.00
07-Feb-89 T T m	Cadmium, ICPES	ND 0.0050	0.77	1.00	77.00
07-Feb-89 T T m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00
07-Feb-89 T T m	Cadmium, ICPES	ND 0.0050	0.80	1.00	80.00
04-Apr-89 T T m	Cadmium, ICPES	ND 0.0050	0.89	1.00	88.70
04-Apr-89 T T m	Cadmium, ICPES	ND 0.0050	0.90	1.00	90.30
04-Apr-89 T T m	Cadmium, ICPES	ND 0.0050	0.86	1.00	85.90
04-Apr-89 T T m	Cadmium, ICPES	ND 0.0050	0.87	1.00	86.50

Number of Samples = 73 — Below acceptance = 0
Mean % Recovery = 87 — Above acceptance = 0
Standard Deviation = 9.32 — Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Calcium, ICPES	ND 1.00	2.69	3.00	89.67
26-Jan-89 P b	Calcium, ICPES	ND 1.00	26.6	30.0	88.67
09-Jan-89 P m	Calcium, ICPES	5090	5780	148.0	466.22
09-Jan-89 P m	Calcium, ICPES	5090	5410	143.0	223.78
26-Jan-89 P m	Calcium, ICPES	5880	6540	926.0	71.27

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
26-Jan-89 P m	Calcium, ICPES	5880	6850	966.0	100.41
17-Jan-89 P B b	Calcium, ICPES	ND 1.00	10.0	10.0	100.00
25-Jan-89 P B b	Calcium, ICPES	ND 1.00	9.10	10.0	91.00
04-Apr-89 P B b	Calcium, ICPES	ND 1.00	9.24	10.0	92.40
25-Jan-89 P B m	Calcium, ICPES	<5X 1.10	9.70	10.0	86.00
25-Jan-89 P B m	Calcium, ICPES	<5X 1.10	9.90	10.0	88.00
04-Apr-89 P B m	Calcium, ICPES	<5X 1.14	10.4	10.0	92.60
04-Apr-89 P B m	Calcium, ICPES	<5X 1.14	10.3	10.0	91.60
23-Jan-89 P T b	Calcium, ICPES	ND 1.00	9.50	10.0	95.00
04-Apr-89 P T b	Calcium, ICPES	ND 1.00	9.21	10.0	92.10
23-Jan-89 P T m	Calcium, ICPES	150.0	160.0	10.0	100.00
23-Jan-89 P T m	Calcium, ICPES	150.0	160.0	10.0	100.00
04-Apr-89 P T m	Calcium, ICPES	159.0	172.0	10.0	130.00
04-Apr-89 P T m	Calcium, ICPES	159.0	170.0	10.0	110.00

Number of Samples = 19 — Below acceptance = 1
Mean % Recovery = 121 — Above acceptance = 3
Standard Deviation = 89.25 — Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Chromium, ICPES	ND 0.030	0.082	0.10	82.00
09-Jan-89 P m	Chromium, ICPES	11.6	17.1	4.76	115.55
09-Jan-89 P m	Chromium, ICPES	11.6	16.8	4.93	105.48
15-Mar-89 P m	Chromium, ICPES	14.6	3970	4585	86.27
15-Mar-89 P m	Chromium, ICPES	14.6	3840	4385	87.24
25-Jan-89 P B b	Chromium, ICPES	ND 0.30	0.90	1.00	89.50
04-Apr-89 P B b	Chromium, ICPES	ND 0.030	0.91	1.00	90.80
25-Jan-89 P B m	Chromium, ICPES	ND 0.30	0.83	1.00	82.50
25-Jan-89 P B m	Chromium, ICPES	ND 0.30	0.82	1.00	82.00
04-Apr-89 P B m	Chromium, ICPES	ND 0.030	0.88	1.00	88.00
04-Apr-89 P B m	Chromium, ICPES	ND 0.030	0.88	1.00	88.00
04-Apr-89 P T b	Chromium, ICPES	ND 0.030	1.10	1.00	110.00
20-Jan-89 P T m	Chromium, ICPES	ND 0.030	1.05	1.00	105.00
20-Jan-89 P T m	Chromium, ICPES	ND 0.030	1.03	1.00	103.00
04-Apr-89 P T m	Chromium, ICPES	ND 0.030	1.09	1.00	109.00
04-Apr-89 P T m	Chromium, ICPES	ND 0.030	1.10	1.00	110.00
27-Jan-89 T b	Chromium, ICPES	ND 0.030	<5X 0.093	0.10	93.00
27-Jan-89 T m	Chromium, ICPES	29.0	32.0	5.00	60.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
27-Jan-89 T m	Chromium, ICPES	29.0	31.0	4.90	40.82
15-Mar-89 T m	Chromium, ICPES	30.9	3360	4100	81.20
15-Mar-89 T m	Chromium, ICPES	30.9	3960	4855	80.93
12-Apr-89 T A b	Chromium, ICPES	ND 0.030	0.87	1.00	87.10
06-Feb-89 T A m	Chromium, ICPES	ND 0.030	0.92	1.00	92.40
06-Feb-89 T A m	Chromium, ICPES	ND 0.030	0.96	1.00	96.00
08-Feb-89 T A m	Chromium, ICPES	ND 0.030	0.91	1.00	91.30
08-Feb-89 T A m	Chromium, ICPES	ND 0.030	0.92	1.00	91.90
04-Mar-89 T A m	Chromium, ICPES	ND 0.030	0.88	1.00	87.50
04-Mar-89 T A m	Chromium, ICPES	ND 0.030	0.85	1.00	85.20
07-Mar-89 T A m	Chromium, ICPES	ND 0.030	0.74	1.00	74.10
07-Mar-89 T A m	Chromium, ICPES	ND 0.030	0.78	1.00	77.80
04-Apr-89 T A m	Chromium, ICPES	ND 0.030	0.77	1.00	77.30
04-Apr-89 T A m	Chromium, ICPES	ND 0.030	0.73	1.00	73.30
07-Feb-89 T B m	Chromium, ICPES	<5X 0.033	0.86	1.00	82.50
07-Feb-89 T B m	Chromium, ICPES	<5X 0.033	0.86	1.00	82.70
09-Feb-89 T B m	Chromium, ICPES	ND 0.030	0.87	1.00	86.80
09-Feb-89 T B m	Chromium, ICPES	ND 0.030	0.86	1.00	86.00
23-Feb-89 T B m	Chromium, ICPES	<5X 0.036	0.89	1.00	85.20
23-Feb-89 T B m	Chromium, ICPES	<5X 0.036	0.89	1.00	85.20
27-Feb-89 T B m	Chromium, ICPES	<5X 0.031	0.93	1.00	89.90
27-Feb-89 T B m	Chromium, ICPES	<5X 0.031	0.94	1.00	91.10
04-Mar-89 T B m	Chromium, ICPES	ND 0.030	0.92	1.00	91.60
04-Mar-89 T B m	Chromium, ICPES	ND 0.030	0.92	1.00	91.60
04-Mar-89 T B m	Chromium, ICPES	ND 0.030	0.86	1.00	85.90
04-Mar-89 T B m	Chromium, ICPES	ND 0.030	0.86	1.00	85.70
04-Apr-89 T B m	Chromium, ICPES	ND 0.030	0.85	1.00	84.60
04-Apr-89 T B m	Chromium, ICPES	ND 0.030	0.85	1.00	85.00
21-Feb-89 T E m	Chromium, ICPES	<5X 0.042	0.86	1.00	81.60
21-Feb-89 T E m	Chromium, ICPES	<5X 0.042	0.86	1.00	81.30
21-Feb-89 T E m	Chromium, ICPES	<5X 0.075	0.90	1.00	82.00
21-Feb-89 T E m	Chromium, ICPES	<5X 0.075	0.89	1.00	81.70
04-Apr-89 T E m	Chromium, ICPES	ND 0.030	0.82	1.00	81.80
04-Apr-89 T E m	Chromium, ICPES	ND 0.030	0.81	1.00	81.30
04-Apr-89 T E m	Chromium, ICPES	<5X 0.052	0.85	1.00	80.10
04-Apr-89 T E m	Chromium, ICPES	<5X 0.052	0.85	1.00	79.70
04-Apr-89 T T b	Chromium, ICPES	ND 0.030	0.93	1.00	92.80

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
07-Feb-89 T T m	Chromium, ICPES	<5X 0.034	0.86	1.00	82.90
07-Feb-89 T T m	Chromium, ICPES	<5X 0.034	0.87	1.00	83.90
07-Feb-89 T T m	Chromium, ICPES	<5X 0.053	0.85	1.00	80.00
07-Feb-89 T T m	Chromium, ICPES	<5X 0.053	0.89	1.00	83.20
04-Apr-89 T T m	Chromium, ICPES	ND 0.030	0.86	1.00	85.70
04-Apr-89 T T m	Chromium, ICPES	ND 0.030	0.87	1.00	87.00
04-Apr-89 T T m	Chromium, ICPES	<5X 0.038	0.86	1.00	81.90
04-Apr-89 T T m	Chromium, ICPES	<5X 0.038	0.86	1.00	82.10

Number of Samples = 63 Below acceptance = 7
Mean % Recovery = 86 Above acceptance = 0
Standard Deviation = 11.06 Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Copper, ICPES	ND 0.020	0.16	0.20	80.00
09-Jan-89 P m	Copper, ICPES	33.4	43.4	9.52	105.04
09-Jan-89 P m	Copper, ICPES	33.4	46.0	9.86	127.79
15-Mar-89 P m	Copper, ICPES	49.6	3930	4385	88.49
15-Mar-89 P m	Copper, ICPES	49.6	4150	4585	89.43
17-Jan-89 P B b	Copper, ICPES	ND 0.020	0.88	1.00	88.00
25-Jan-89 P B b	Copper, ICPES	ND 0.020	0.87	1.00	87.00
04-Apr-89 P B b	Copper, ICPES	ND 0.020	0.90	1.00	89.90
25-Jan-89 P B m	Copper, ICPES	ND 0.020	0.78	1.00	78.00
25-Jan-89 P B m	Copper, ICPES	ND 0.020	0.77	1.00	77.00
04-Apr-89 P B m	Copper, ICPES	ND 0.020	0.88	1.00	87.60
04-Apr-89 P B m	Copper, ICPES	ND 0.020	0.88	1.00	88.10
23-Jan-89 P T b	Copper, ICPES	ND 0.020	1.10	1.00	110.00
04-Apr-89 P T b	Copper, ICPES	ND 0.020	1.10	1.00	110.00
23-Jan-89 P T m	Copper, ICPES	ND 0.020	1.10	1.00	110.00
23-Jan-89 P T m	Copper, ICPES	ND 0.020	1.10	1.00	110.00
04-Apr-89 P T m	Copper, ICPES	ND 0.020	1.13	1.00	113.00
04-Apr-89 P T m	Copper, ICPES	ND 0.020	1.13	1.00	113.00
27-Jan-89 T b	Copper, ICPES	ND 0.020	0.18	0.20	90.00
27-Jan-89 T m	Copper, ICPES	42.0	50.0	10.0	80.00
27-Jan-89 T m	Copper, ICPES	42.0	48.0	9.80	61.22
15-Mar-89 T m	Copper, ICPES	39.1	3800	4100	91.73
15-Mar-89 T m	Copper, ICPES	39.1	4470	4855	91.26
07-Feb-89 T A b	Copper, ICPES	ND 0.020	0.99	1.00	99.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
07-Feb-89 T A b Copper, ICPES		ND 0.020	0.92	1.00	92.00
07-Mar-89 T A b Copper, ICPES		ND 0.020	0.85	1.00	84.50
12-Apr-89 T A b Copper, ICPES		ND 0.020	0.87	1.00	87.10
06-Feb-89 T A m Copper, ICPES		ND 0.020	0.94	1.00	94.00
06-Feb-89 T A m Copper, ICPES		ND 0.020	0.97	1.00	97.00
07-Feb-89 T A m Copper, ICPES		ND 0.020	0.93	1.00	93.00
07-Feb-89 T A m Copper, ICPES		ND 0.020	0.93	1.00	93.00
04-Mar-89 T A m Copper, ICPES		ND 0.020	0.86	1.00	86.20
04-Mar-89 T A m Copper, ICPES		ND 0.020	0.86	1.00	86.00
08-Mar-89 T A m Copper, ICPES		ND 0.020	0.75	1.00	75.10
08-Mar-89 T A m Copper, ICPES		ND 0.020	0.78	1.00	78.40
04-Apr-89 T A m Copper, ICPES		ND 0.020	0.78	1.00	77.80
04-Apr-89 T A m Copper, ICPES		ND 0.020	0.81	1.00	80.90
10-Feb-89 T B b Copper, ICPES		ND 0.020	0.92	1.00	91.80
22-Feb-89 T B b Copper, ICPES		ND 0.20	0.84	1.00	84.30
07-Feb-89 T B m Copper, ICPES		<5X 0.063	0.93	1.00	86.70
07-Feb-89 T B m Copper, ICPES		<5X 0.063	0.93	1.00	86.70
10-Feb-89 T B m Copper, ICPES		<5X 0.021	0.92	1.00	89.90
10-Feb-89 T B m Copper, ICPES		<5X 0.021	0.89	1.00	86.90
22-Feb-89 T B m Copper, ICPES		<5X 0.023	0.90	1.00	87.40
22-Feb-89 T B m Copper, ICPES		<5X 0.023	0.89	1.00	87.00
27-Feb-89 T B m Copper, ICPES		<5X 0.033	0.97	1.00	93.70
27-Feb-89 T B m Copper, ICPES		<5X 0.033	1.00	1.00	96.20
04-Mar-89 T B m Copper, ICPES		ND 0.020	0.92	1.00	92.10
04-Mar-89 T B m Copper, ICPES		ND 0.020	0.91	1.00	90.60
04-Mar-89 T B m Copper, ICPES		ND 0.020	0.92	1.00	92.30
04-Mar-89 T B m Copper, ICPES		ND 0.020	0.90	1.00	90.30
04-Apr-89 T B m Copper, ICPES		<5X 0.023	0.87	1.00	85.10
04-Apr-89 T B m Copper, ICPES		<5X 0.023	0.86	1.00	83.90
21-Feb-89 T E b Copper, ICPES		ND 0.020	0.91	1.00	90.50
21-Feb-89 T E m Copper, ICPES		<5X 0.070	0.90	1.00	83.00
21-Feb-89 T E m Copper, ICPES		<5X 0.032	0.88	1.00	84.90
21-Feb-89 T E m Copper, ICPES		<5X 0.070	0.92	1.00	85.00
21-Feb-89 T E m Copper, ICPES		<5X 0.032	0.90	1.00	86.50
04-Apr-89 T E m Copper, ICPES		ND 0.020	0.85	1.00	85.00
04-Apr-89 T E m Copper, ICPES		ND 0.020	0.80	1.00	80.10
04-Apr-89 T E m Copper, ICPES		ND 0.020	0.80	1.00	79.60

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Apr-89 T E m	Copper, ICPES	ND 0.020	0.85	1.00	84.80
07-Feb-89 T T b	Copper, ICPES	ND 0.020	0.94	1.00	94.00
04-Apr-89 T T b	Copper, ICPES	ND 0.020	0.92	1.00	91.50
07-Feb-89 T T m	Copper, ICPES	ND 0.020	0.88	1.00	88.00
07-Feb-89 T T m	Copper, ICPES	ND 0.020	0.90	1.00	90.00
07-Feb-89 T T m	Copper, ICPES	ND 0.020	0.89	1.00	89.00
07-Feb-89 T T m	Copper, ICPES	ND 0.020	0.86	1.00	86.00
04-Apr-89 T T m	Copper, ICPES	<5X 0.026	0.91	1.00	88.70
04-Apr-89 T T m	Copper, ICPES	<5X 0.021	0.92	1.00	90.30
04-Apr-89 T T m	Copper, ICPES	<5X 0.021	0.93	1.00	90.80
04-Apr-89 T T m	Copper, ICPES	<5X 0.026	0.90	1.00	87.40

Number of Samples = 72 Below acceptance = 7
Mean % Recovery = 89 Above acceptance = 1
Standard Deviation = 10.02 Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Lead, ICPES	ND 0.050	7.42	10.0	74.20
09-Jan-89 P m	Lead, ICPES	679.0	1090	493.0	83.37
09-Jan-89 P m	Lead, ICPES	679.0	1088	476.0	85.92
15-Mar-89 P m	Lead, ICPES	819.0	48200	43850	108.05
15-Mar-89 P m	Lead, ICPES	819.0	59400	45850	127.77
17-Jan-89 P B b	Lead, ICPES	ND 0.050	0.90	1.00	90.00
25-Jan-89 P B b	Lead, ICPES	ND 0.050	0.85	1.00	85.00
04-Apr-89 P B b	Lead, ICPES	ND 0.050	0.88	1.00	87.50
25-Jan-89 P B m	Lead, ICPES	ND 0.23	0.91	1.00	91.00
25-Jan-89 P B m	Lead, ICPES	ND 0.23	0.88	1.00	88.00
23-Jan-89 P T b	Lead, ICPES	ND 0.050	0.93	1.00	93.00
04-Apr-89 P T b	Lead, ICPES	ND 0.050	0.89	1.00	88.50
23-Jan-89 P T m	Lead, ICPES	0.49	1.30	1.00	81.00
23-Jan-89 P T m	Lead, ICPES	0.49	1.30	1.00	81.00
04-Apr-89 P T m	Lead, ICPES	0.49	1.37	1.00	87.80
04-Apr-89 P T m	Lead, ICPES	0.49	1.37	1.00	87.80
27-Jan-89 T b	Lead, ICPES	ND 0.0050	8.60	10.0	86.00
27-Jan-89 T m	Lead, ICPES	490.0	840.0	500.0	70.00
27-Jan-89 T m	Lead, ICPES	490.0	820.0	490.0	67.35
20-Mar-89 T m	Lead, ICPES	402.0	56200	48550	114.93
20-Mar-89 T m	Lead, ICPES	402.0	47000	41000	113.65

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Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
07-Feb-89 T A b	Lead, ICPES	ND 0.050	0.99	1.00	99.00
07-Feb-89 T A b	Lead, ICPES	ND 0.050	0.88	1.00	88.00
07-Mar-89 T A b	Lead, ICPES	ND 0.050	1.73	2.00	86.50
06-Feb-89 T A m	Lead, ICPES	ND 0.050	1.00	1.00	100.00
06-Feb-89 T A m	Lead, ICPES	ND 0.050	0.97	1.00	97.00
07-Feb-89 T A m	Lead, ICPES	ND 0.050	0.86	1.00	86.00
07-Feb-89 T A m	Lead, ICPES	ND 0.050	0.87	1.00	87.00
04-Mar-89 T A m	Lead, ICPES	ND 0.050	0.86	1.00	86.30
04-Mar-89 T A m	Lead, ICPES	ND 0.050	0.86	1.00	85.60
08-Mar-89 T A m	Lead, ICPES	ND 0.050	1.58	2.00	79.00
08-Mar-89 T A m	Lead, ICPES	ND 0.050	1.51	2.00	75.50
10-Feb-89 T B b	Lead, ICPES	ND 0.050	0.91	1.00	90.60
22-Feb-89 T B b	Lead, ICPES	ND 0.050	0.81	1.00	81.20
07-Feb-89 T B m	Lead, ICPES	<5X 0.074	0.93	1.00	85.60
07-Feb-89 T B m	Lead, ICPES	<5X 0.074	0.87	1.00	79.60
10-Feb-89 T B m	Lead, ICPES	ND 0.050	0.84	1.00	83.60
10-Feb-89 T B m	Lead, ICPES	ND 0.050	0.86	1.00	85.70
22-Feb-89 T B m	Lead, ICPES	ND 0.0050	0.90	1.00	90.00
22-Feb-89 T B m	Lead, ICPES	ND 0.0050	0.86	1.00	86.00
27-Feb-89 T B m	Lead, ICPES	ND 0.050	0.86	1.00	86.10
27-Feb-89 T B m	Lead, ICPES	ND 0.050	0.87	1.00	86.70
04-Mar-89 T B m	Lead, ICPES	ND 0.050	0.94	1.00	94.30
04-Mar-89 T B m	Lead, ICPES	ND 0.050	0.92	1.00	92.10
04-Mar-89 T B m	Lead, ICPES	ND 0.050	0.95	1.00	94.60
04-Mar-89 T B m	Lead, ICPES	ND 0.050	0.93	1.00	93.10
21-Feb-89 T E b	Lead, ICPES	ND 0.050	0.89	1.00	89.10
21-Feb-89 T E m	Lead, ICPES	ND 0.050	0.78	1.00	78.00
21-Feb-89 T E m	Lead, ICPES	ND 0.050	0.79	1.00	79.00
21-Feb-89 T E m	Lead, ICPES	ND 0.050	0.82	1.00	82.00
21-Feb-89 T E m	Lead, ICPES	ND 0.050	0.80	1.00	80.00
07-Feb-89 T T b	Lead, ICPES	ND 0.050	0.92	1.00	92.00
04-Apr-89 T T b	Lead, ICPES	ND 0.050	0.91	1.00	90.90
07-Feb-89 T T m	Lead, ICPES	ND 0.050	0.79	1.00	79.00
07-Feb-89 T T m	Lead, ICPES	ND 0.050	0.78	1.00	78.00
07-Feb-89 T T m	Lead, ICPES	ND 0.050	0.79	1.00	79.00
07-Feb-89 T T m	Lead, ICPES	ND 0.050	0.76	1.00	76.00
04-Apr-89 T T m	Lead, ICPES	ND 0.050	0.67	1.00	67.10

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Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Apr-89 T T m	Lead, ICPES	ND 0.050	0.65	1.00	65.10
04-Apr-89 T T m	Lead, ICPES	ND 0.050	0.69	1.00	69.40
04-Apr-89 T T m	Lead, ICPES	ND 0.050	0.65	1.00	65.00
Number of Samples = 61			Below acceptance = 16		
Mean % Recovery = 86			Above acceptance = 1		
Standard Deviation = 11.35			Acceptance Criteria 80.00 - 120.00		
09-Jan-89 P b	Nickel, ICPES	ND 0.020	ND 0.020	0.020	0.00
09-Jan-89 P m	Nickel, ICPES	<5X 3.14	3.27	0.95	13.66
09-Jan-89 P m	Nickel, ICPES	<5X 3.14	3.99	0.99	86.21
15-Mar-89 P m	Nickel, ICPES	<5X 2.69	680.0	877.0	77.23
15-Mar-89 P m	Nickel, ICPES	<5X 2.69	700.0	917.0	76.04
17-Jan-89 P B b	Nickel, ICPES	ND 0.020	0.91	1.00	91.00
25-Jan-89 P B b	Nickel, ICPES	ND 0.020	0.91	1.00	91.00
04-Apr-89 P B b	Nickel, ICPES	ND 0.020	0.91	1.00	90.60
25-Jan-89 P B m	Nickel, ICPES	ND 0.020	0.84	1.00	84.00
25-Jan-89 P B m	Nickel, ICPES	ND 0.020	0.82	1.00	82.00
04-Apr-89 P B m	Nickel, ICPES	ND 0.020	0.88	1.00	88.30
04-Apr-89 P B m	Nickel, ICPES	ND 0.020	0.90	1.00	89.50
23-Jan-89 P T b	Nickel, ICPES	ND 0.020	1.10	1.00	110.00
04-Apr-89 P T b	Nickel, ICPES	ND 0.020	1.10	1.00	110.00
23-Jan-89 P T m	Nickel, ICPES	<5X 0.020	1.00	1.00	98.00
23-Jan-89 P T m	Nickel, ICPES	<5X 0.020	1.10	1.00	108.00
04-Apr-89 P T m	Nickel, ICPES	ND 0.020	1.11	1.00	111.00
04-Apr-89 P T m	Nickel, ICPES	ND 0.020	1.11	1.00	111.00
27-Jan-89 T b	Nickel, ICPES	ND 0.020	<5X 0.045	0.050	90.00
27-Jan-89 T m	Nickel, ICPES	13.0	15.0	2.50	80.00
27-Jan-89 T m	Nickel, ICPES	13.0	14.0	2.40	41.67
15-Mar-89 T m	Nickel, ICPES	10.7	701.0	971.0	71.09
15-Mar-89 T m	Nickel, ICPES	10.7	600.0	820.0	71.87
07-Feb-89 T A b	Nickel, ICPES	ND 0.020	0.96	1.00	96.00
07-Feb-89 T A b	Nickel, ICPES	ND 0.020	0.90	1.00	90.00
07-Mar-89 T A b	Nickel, ICPES	ND 0.020	0.84	1.00	84.30
12-Apr-89 T A b	Nickel, ICPES	ND 0.020	0.88	1.00	88.00
06-Feb-89 T A m	Nickel, ICPES	ND 0.020	0.96	1.00	96.00
06-Feb-89 T A m	Nickel, ICPES	ND 0.020	0.90	1.00	90.00

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Matrix: P = Pretreatment, T = Treated

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Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
07-Feb-89 T A m Nickel, ICPES		ND 0.020	0.90	1.00	90.00
07-Feb-89 T A m Nickel, ICPES		ND 0.020	0.91	1.00	91.00
04-Mar-89 T A m Nickel, ICPES		ND 0.020	0.89	1.00	88.60
04-Mar-89 T A m Nickel, ICPES		ND 0.020	0.87	1.00	86.50
08-Mar-89 T A m Nickel, ICPES		ND 0.020	0.75	1.00	74.90
08-Mar-89 T A m Nickel, ICPES		ND 0.020	0.79	1.00	78.50
04-Apr-89 T A m Nickel, ICPES		ND 0.020	0.77	1.00	77.40
04-Apr-89 T A m Nickel, ICPES		ND 0.020	0.74	1.00	74.40
10-Feb-89 T B b Nickel, ICPES		ND 0.020	0.88	1.00	88.30
22-Feb-89 T B b Nickel, ICPES		ND 0.020	0.82	1.00	81.90
07-Feb-89 T B m Nickel, ICPES		ND 0.020	0.83	1.00	83.00
07-Feb-89 T B m Nickel, ICPES		ND 0.020	0.83	1.00	83.00
10-Feb-89 T B m Nickel, ICPES		ND 0.020	0.83	1.00	83.40
10-Feb-89 T B m Nickel, ICPES		ND 0.020	0.83	1.00	83.40
23-Feb-89 T B m Nickel, ICPES		ND 0.020	0.82	1.00	81.80
23-Feb-89 T B m Nickel, ICPES		ND 0.020	0.82	1.00	82.20
27-Feb-89 T B m Nickel, ICPES		ND 0.020	0.94	1.00	93.60
27-Feb-89 T B m Nickel, ICPES		ND 0.020	0.93	1.00	92.70
04-Mar-89 T B m Nickel, ICPES		ND 0.020	0.86	1.00	86.00
04-Mar-89 T B m Nickel, ICPES		ND 0.020	0.84	1.00	84.40
04-Mar-89 T B m Nickel, ICPES		ND 0.020	0.91	1.00	90.70
04-Mar-89 T B m Nickel, ICPES		ND 0.020	0.91	1.00	90.60
04-Apr-89 T B m Nickel, ICPES		ND 0.020	0.84	1.00	83.90
04-Apr-89 T B m Nickel, ICPES		ND 0.020	0.83	1.00	82.90
21-Feb-89 T E b Nickel, ICPES		ND 0.020	0.88	1.00	88.00
21-Feb-89 T E m Nickel, ICPES		ND 0.020	0.80	1.00	80.00
21-Feb-89 T E m Nickel, ICPES		ND 0.020	0.80	1.00	80.00
21-Feb-89 T E m Nickel, ICPES		ND 0.020	0.80	1.00	80.00
21-Feb-89 T E m Nickel, ICPES		ND 0.020	0.80	1.00	80.00
04-Apr-89 T E m Nickel, ICPES		ND 0.020	0.81	1.00	81.10
04-Apr-89 T E m Nickel, ICPES		ND 0.020	0.80	1.00	79.70
04-Apr-89 T E m Nickel, ICPES		ND 0.020	0.83	1.00	83.20
04-Apr-89 T E m Nickel, ICPES		ND 0.020	0.84	1.00	84.20
07-Feb-89 T T b Nickel, ICPES		ND 0.020	0.92	1.00	92.00
04-Apr-89 T T b Nickel, ICPES		ND 0.020	0.94	1.00	94.10
07-Feb-89 T T m Nickel, ICPES		ND 0.020	0.83	1.00	83.00
07-Feb-89 T T m Nickel, ICPES		ND 0.020	0.78	1.00	78.00

NC: Not Calculable

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Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
07-Feb-89 T T m	Nickel, ICPES	ND 0.020	0.81	1.00	81.00
07-Feb-89 T T m	Nickel, ICPES	ND 0.020	0.80	1.00	80.00
04-Apr-89 T T m	Nickel, ICPES	ND 0.020	0.84	1.00	84.20
04-Apr-89 T T m	Nickel, ICPES	ND 0.020	0.86	1.00	86.10
04-Apr-89 T T m	Nickel, ICPES	ND 0.020	0.82	1.00	82.10
04-Apr-89 T T m	Nickel, ICPES	ND 0.020	0.83	1.00	82.90
Number of Samples = 72			Below acceptance = 13		
Mean % Recovery = 83			Above acceptance = 0		
Standard Deviation = 16.54			Acceptance Criteria 80.00 - 120.00		
09-Jan-89 P b	Selenium, ICPES	ND 0.30	ND 0.30	0.010	0.00
09-Jan-89 P m	Selenium, ICPES	ND 14.7	ND 14.3	0.48	0.00
09-Jan-89 P m	Selenium, ICPES	ND 14.7	ND 14.8	0.49	0.00
27-Jan-89 T b	Selenium, ICPES	ND 0.30	<5X 1.00	1.00	100.00
27-Jan-89 T m	Selenium, ICPES	<5X 50.0	87.0	49.0	75.51
27-Jan-89 T m	Selenium, ICPES	<5X 50.0	88.0	50.0	76.00
Number of Samples = 6			Below acceptance = 5		
Mean % Recovery = 41			Above acceptance = 0		
Standard Deviation = 46.76			Acceptance Criteria 80.00 - 120.00		
09-Jan-89 P b	Silver, ICPES	ND 0.030	0.043	0.050	86.00
26-Jan-89 P b	Silver, ICPES	ND 0.030	0.81	1.00	81.00
09-Jan-89 P m	Silver, ICPES	ND 1.47	ND 1.48	2.46	0.00
09-Jan-89 P m	Silver, ICPES	ND 1.47	ND 1.43	2.38	0.00
26-Jan-89 P m	Silver, ICPES	ND 1.41	2.41	4.83	49.90
26-Jan-89 P m	Silver, ICPES	ND 1.41	2.40	4.63	51.84
15-Mar-89 P m	Silver, ICPES	ND 2.26	739.0	917.0	80.59
15-Mar-89 P m	Silver, ICPES	ND 2.26	713.0	877.0	81.30
17-Jan-89 P B b	Silver, ICPES	ND 0.030	0.88	1.00	88.00
25-Jan-89 P B b	Silver, ICPES	ND 0.030	0.84	1.00	84.00
04-Apr-89 P B b	Silver, ICPES	ND 0.030	0.90	1.00	90.30
25-Jan-89 P B m	Silver, ICPES	ND 0.030	0.76	1.00	76.00
25-Jan-89 P B m	Silver, ICPES	ND 0.030	0.75	1.00	75.00
04-Apr-89 P B m	Silver, ICPES	ND 0.030	0.88	1.00	87.60
04-Apr-89 P B m	Silver, ICPES	ND 0.030	0.86	1.00	85.50

NC: Not Calculable

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Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
23-Jan-89 P T b	Silver, ICPES	ND 0.030	0.92	1.00	92.00
04-Apr-89 P T b	Silver, ICPES	ND 0.030	0.92	1.00	91.80
23-Jan-89 P T m	Silver, ICPES	ND 0.030	0.83	1.00	83.00
23-Jan-89 P T m	Silver, ICPES	ND 0.030	0.83	1.00	83.00
04-Apr-89 P T m	Silver, ICPES	ND 0.030	0.91	1.00	91.30
04-Apr-89 P T m	Silver, ICPES	ND 0.030	0.92	1.00	92.30
27-Jan-89 T b	Silver, ICPES	ND 0.030	0.93	1.00	93.00
27-Jan-89 T m	Silver, ICPES	4.40	42.0	49.0	76.73
27-Jan-89 T m	Silver, ICPES	4.40	42.0	50.0	75.20
15-Mar-89 T m	Silver, ICPES	ND 2.34	679.0	820.0	82.80
15-Mar-89 T m	Silver, ICPES	ND 2.34	791.0	971.0	81.46
07-Feb-89 T A b	Silver, ICPES	ND 0.030	0.92	1.00	92.00
07-Feb-89 T A b	Silver, ICPES	ND 0.030	0.93	1.00	93.00
07-Mar-89 T A b	Silver, ICPES	ND 0.050	1.68	2.00	84.00
12-Apr-89 T A b	Silver, ICPES	ND 0.030	1.79	2.00	89.50
06-Feb-89 T A m	Silver, ICPES	ND 0.030	0.86	1.00	86.00
06-Feb-89 T A m	Silver, ICPES	ND 0.030	0.90	1.00	90.00
07-Feb-89 T A m	Silver, ICPES	ND 0.030	0.91	1.00	91.00
07-Feb-89 T A m	Silver, ICPES	ND 0.030	0.91	1.00	91.00
04-Mar-89 T A m	Silver, ICPES	ND 0.030	0.85	1.00	84.80
04-Mar-89 T A m	Silver, ICPES	ND 0.030	0.84	1.00	83.50
08-Mar-89 T A m	Silver, ICPES	ND 0.030	1.54	2.00	77.00
08-Mar-89 T A m	Silver, ICPES	ND 0.030	1.48	2.00	74.00
04-Apr-89 T A m	Silver, ICPES	ND 0.030	1.64	2.00	82.00
04-Apr-89 T A m	Silver, ICPES	ND 0.030	1.58	2.00	79.00
10-Feb-89 T B b	Silver, ICPES	ND 0.030	0.88	1.00	88.20
22-Feb-89 T B b	Silver, ICPES	ND 0.030	0.83	1.00	82.90
07-Feb-89 T B m	Silver, ICPES	ND 0.030	0.84	1.00	84.00
07-Feb-89 T B m	Silver, ICPES	ND 0.030	0.85	1.00	85.00
10-Feb-89 T B m	Silver, ICPES	ND 0.030	0.85	1.00	85.00
10-Feb-89 T B m	Silver, ICPES	ND 0.030	0.84	1.00	84.00
22-Feb-89 T B m	Silver, ICPES	ND 0.030	0.89	1.00	89.00
22-Feb-89 T B m	Silver, ICPES	ND 0.030	0.88	1.00	88.00
27-Feb-89 T B m	Silver, ICPES	ND 0.030	0.92	1.00	91.70
27-Feb-89 T B m	Silver, ICPES	ND 0.030	0.87	1.00	87.00
27-Feb-89 T B m	Silver, ICPES	ND 0.030	0.91	1.00	91.10
04-Mar-89 T B m	Silver, ICPES	ND 0.030	0.89	1.00	88.50

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Mar-89 T B m	Silver, ICPES	ND 0.030	0.91	1.00	91.00
04-Mar-89 T B m	Silver, ICPES	ND 0.030	0.89	1.00	88.70
04-Mar-89 T B m	Silver, ICPES	ND 0.030	0.92	1.00	92.00
04-Apr-89 T B m	Silver, ICPES	ND 0.030	0.85	1.00	85.20
04-Apr-89 T B m	Silver, ICPES	ND 0.030	0.87	1.00	86.90
21-Feb-89 T E b	Silver, ICPES	ND 0.030	0.92	1.00	92.00
21-Feb-89 T E m	Silver, ICPES	ND 0.030	0.89	1.00	89.00
21-Feb-89 T E m	Silver, ICPES	ND 0.030	0.89	1.00	89.00
21-Feb-89 T E m	Silver, ICPES	ND 0.030	0.89	1.00	89.00
21-Feb-89 T E m	Silver, ICPES	ND 0.030	0.89	1.00	89.00
04-Apr-89 T E m	Silver, ICPES	ND 0.030	0.90	1.00	89.50
04-Apr-89 T E m	Silver, ICPES	ND 0.030	0.90	1.00	89.50
04-Apr-89 T E m	Silver, ICPES	ND 0.030	0.88	1.00	88.40
04-Apr-89 T E m	Silver, ICPES	ND 0.030	0.91	1.00	90.80
03-Feb-89 T T b	Silver, ICPES	0.00000	0.87	1.00	87.00
07-Feb-89 T T b	Silver, ICPES	ND 0.030	0.92	1.00	92.00
07-Feb-89 T T b	Silver, ICPES	ND 0.030	0.87	1.00	87.00
04-Apr-89 T T b	Silver, ICPES	ND 0.030	0.89	1.00	89.20
07-Feb-89 T T m	Silver, ICPES	ND 0.030	0.88	1.00	88.00
07-Feb-89 T T m	Silver, ICPES	ND 0.030	0.82	1.00	82.00
07-Feb-89 T T m	Silver, ICPES	ND 0.0030	0.79	1.00	79.00
07-Feb-89 T T m	Silver, ICPES	ND 0.030	0.85	1.00	85.00
04-Apr-89 T T m	Silver, ICPES	ND 0.030	0.90	1.00	89.70
04-Apr-89 T T m	Silver, ICPES	ND 0.030	0.92	1.00	92.00
04-Apr-89 T T m	Silver, ICPES	ND 0.030	0.88	1.00	87.50
04-Apr-89 T T m	Silver, ICPES	ND 0.030	0.88	1.00	87.50

Number of Samples = 78 — Below acceptance = 12
Mean % Recovery = 83 — Above acceptance = 0
Standard Deviation = 15.45 — Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Sodium, ICPES	<5x 1.06	1.34	1.00	28.00
09-Jan-89 P m	Sodium, ICPES	95.5	144.0	49.3	98.38
09-Jan-89 P m	Sodium, ICPES	95.5	134.0	47.6	80.88
17-Jan-89 P B b	Sodium, ICPES	ND 1.00	11.0	10.0	110.00
25-Jan-89 P B b	Sodium, ICPES	ND 1.00	9.60	10.0	96.00
04-Apr-89 P B b	Sodium, ICPES	ND 1.00	8.82	10.0	88.20

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
25-Jan-89 P B m	Sodium, ICPES	ND 1.00	8.60	10.0	86.00
25-Jan-89 P B m	Sodium, ICPES	ND 1.00	7.70	10.0	77.00
04-Apr-89 P B m	Sodium, ICPES	ND 1.00	9.21	10.0	92.10
04-Apr-89 P B m	Sodium, ICPES	ND 1.00	8.70	10.0	87.00
20-Jan-89 P T b	Sodium, ICPES	ND 1.00	9.30	10.0	93.00
04-Apr-89 P T b	Sodium, ICPES	ND 1.00	9.26	10.0	92.60
23-Jan-89 P T m	Sodium, ICPES	1200	1200	10.0	0.00
23-Jan-89 P T m	Sodium, ICPES	1200	1200	10.0	0.00
04-Apr-89 P T m	Sodium, ICPES	1270	1240	10.0	0.00
04-Apr-89 P T m	Sodium, ICPES	1270	1230	10.0	0.00
27-Jan-89 T b	Sodium, ICPES	ND 1.00	<5X 4.60	5.00	92.00
27-Jan-89 T m	Sodium, ICPES	480.0	680.0	250.0	80.00
27-Jan-89 T m	Sodium, ICPES	480.0	660.0	240.0	75.00
07-Feb-89 T A b	Sodium, ICPES	ND 1.00	10.0	10.0	100.00
07-Feb-89 T A b	Sodium, ICPES	ND 1.00	9.20	10.0	92.00
07-Mar-89 T A b	Sodium, ICPES	ND 1.00	8.92	10.0	89.16
12-Apr-89 T A b	Sodium, ICPES	ND 1.00	11.6	10.0	116.00
06-Feb-89 T A m	Sodium, ICPES	7.50	16.0	10.0	85.00
06-Feb-89 T A m	Sodium, ICPES	7.50	17.0	10.0	95.00
07-Feb-89 T A m	Sodium, ICPES	<5X 3.40	12.0	10.0	86.00
07-Feb-89 T A m	Sodium, ICPES	<5X 3.40	12.0	10.0	86.00
04-Mar-89 T A m	Sodium, ICPES	11.5	21.1	10.0	96.00
04-Mar-89 T A m	Sodium, ICPES	11.5	21.2	10.0	97.00
08-Mar-89 T A m	Sodium, ICPES	8.30	16.7	10.0	84.00
08-Mar-89 T A m	Sodium, ICPES	8.30	17.9	10.0	96.00
04-Apr-89 T A m	Sodium, ICPES	11.8	22.6	10.0	108.00
04-Apr-89 T A m	Sodium, ICPES	11.8	22.4	10.0	106.00
10-Feb-89 T B b	Sodium, ICPES	ND 1.00	9.39	10.0	93.86
22-Feb-89 T B b	Sodium, ICPES	ND 1.00	9.24	10.0	92.45
07-Feb-89 T B m	Sodium, ICPES	21.0	29.0	10.0	80.00
07-Feb-89 T B m	Sodium, ICPES	21.0	29.0	10.0	80.00
10-Feb-89 T B m	Sodium, ICPES	<5X 4.26	12.8	10.0	85.40
10-Feb-89 T B m	Sodium, ICPES	<5X 4.26	13.6	10.0	93.66
22-Feb-89 T B m	Sodium, ICPES	21.8	30.1	10.0	83.00
22-Feb-89 T B m	Sodium, ICPES	21.8	30.6	10.0	88.00
27-Feb-89 T B m	Sodium, ICPES	20.0	29.2	10.0	92.00
27-Feb-89 T B m	Sodium, ICPES	20.0	30.8	10.0	108.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Mar-89 T B m	Sodium, ICPES	9.04	19.0	10.0	99.60
04-Mar-89 T B m	Sodium, ICPES	62.7	73.2	10.0	105.00
04-Mar-89 T B m	Sodium, ICPES	62.7	73.4	10.0	107.00
04-Mar-89 T B m	Sodium, ICPES	9.04	18.9	10.0	98.60
04-Apr-89 T B m	Sodium, ICPES	21.1	30.1	10.0	90.00
04-Apr-89 T B m	Sodium, ICPES	21.1	30.0	10.0	89.00
21-Feb-89 T E b	Sodium, ICPES	ND 1.00	9.83	10.0	98.30
21-Feb-89 T E m	Sodium, ICPES	16.1	26.2	10.0	101.00
21-Feb-89 T E m	Sodium, ICPES	16.1	26.2	10.0	101.00
21-Feb-89 T E m	Sodium, ICPES	15.2	25.0	10.0	98.00
21-Feb-89 T E m	Sodium, ICPES	15.2	24.3	10.0	91.00
04-Apr-89 T E m	Sodium, ICPES	16.8	26.4	10.0	96.00
04-Apr-89 T E m	Sodium, ICPES	18.1	28.3	10.0	102.00
04-Apr-89 T E m	Sodium, ICPES	16.8	27.1	10.0	103.00
04-Apr-89 T E m	Sodium, ICPES	18.1	27.8	10.0	97.00
07-Feb-89 T T b	Sodium, ICPES	ND 1.00	8.70	10.0	87.00
04-Apr-89 T T b	Sodium, ICPES	ND 1.00	9.23	10.0	92.30
07-Feb-89 T T m	Sodium, ICPES	10.0	20.0	10.0	100.00
07-Feb-89 T T m	Sodium, ICPES	10.0	21.0	10.0	110.00
07-Feb-89 T T m	Sodium, ICPES	43.0	52.0	10.0	90.00
07-Feb-89 T T m	Sodium, ICPES	43.0	53.0	10.0	100.00
04-Apr-89 T T m	Sodium, ICPES	47.9	57.6	10.0	97.00
04-Apr-89 T T m	Sodium, ICPES	47.9	57.8	10.0	99.00
04-Apr-89 T T m	Sodium, ICPES	11.2	21.5	10.0	103.00
04-Apr-89 T T m	Sodium, ICPES	11.2	22.1	10.0	109.00

Number of Samples = 68
Mean % Recovery = 87
Standard Deviation = 25.04
Below acceptance = 7
Above acceptance = 0
Acceptance Criteria 80.00 - 120.00

09-Jan-89 P b	Thallium, ICPES	ND 0.10	ND 0.10	1.00	0.00
09-Jan-89 P m	Thallium, ICPES	ND 4.90	7.32	4.93	148.48
09-Jan-89 P m	Thallium, ICPES	ND 4.90	10.0	4.76	210.08
27-Jan-89 T b	Thallium, ICPES	ND 0.10	0.90	1.00	90.00
27-Jan-89 T m	Thallium, ICPES	ND 4.80	40.0	50.0	80.00
27-Jan-89 T m	Thallium, ICPES	ND 4.80	40.0	49.0	81.63

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
Number of Samples = 6			Below acceptance = 1		
Mean % Recovery = 101			Above acceptance = 2		
Standard Deviation = 71.11			Acceptance Criteria 80.00 - 120.00		
09-Jan-89 P b	Zinc, ICPES	ND 0.020	0.86	1.00	85.60
09-Jan-89 P m	Zinc, ICPES	125.0	179.0	47.6	113.45
09-Jan-89 P m	Zinc, ICPES	125.0	170.0	49.3	91.28
15-Mar-89 P m	Zinc, ICPES	132.0	7170	9170	76.75
15-Mar-89 P m	Zinc, ICPES	132.0	6990	8770	78.20
17-Jan-89 P B b	Zinc, ICPES	ND 0.020	0.90	1.00	90.00
25-Jan-89 P B b	Zinc, ICPES	ND 0.020	0.87	1.00	87.00
04-Apr-89 P B b	Zinc, ICPES	ND 0.020	0.89	1.00	89.30
25-Jan-89 P B m	Zinc, ICPES	ND 0.020	0.80	1.00	80.00
25-Jan-89 P B m	Zinc, ICPES	ND 0.020	0.81	1.00	81.00
04-Apr-89 P B m	Zinc, ICPES	ND 0.020	0.87	1.00	86.80
04-Apr-89 P B m	Zinc, ICPES	ND 0.020	0.87	1.00	87.30
23-Jan-89 P T b	Zinc, ICPES	ND 0.020	1.10	1.00	110.00
04-Apr-89 P T b	Zinc, ICPES	ND 0.020	1.09	1.00	109.00
23-Jan-89 P T m	Zinc, ICPES	0.57	2.40	1.00	183.00
23-Jan-89 P T m	Zinc, ICPES	0.57	2.30	1.00	173.00
04-Apr-89 P T m	Zinc, ICPES	0.59	2.45	1.00	186.10
04-Apr-89 P T m	Zinc, ICPES	0.59	2.47	1.00	188.10
27-Jan-89 T b	Zinc, ICPES	ND 0.020	0.94	1.00	94.00
27-Jan-89 T m	Zinc, ICPES	97.0	130.0	50.0	66.00
27-Jan-89 T m	Zinc, ICPES	97.0	130.0	50.0	66.00
15-Mar-89 T m	Zinc, ICPES	93.6	7500	9710	76.28
15-Mar-89 T m	Zinc, ICPES	93.6	6430	8200	77.27
07-Feb-89 T A b	Zinc, ICPES	ND 0.020	0.92	1.00	92.00
07-Feb-89 T A b	Zinc, ICPES	ND 0.020	1.00	1.00	100.00
04-Mar-89 T A b	Zinc, ICPES	ND 0.020	0.94	1.00	93.90
07-Mar-89 T A b	Zinc, ICPES	ND 0.020	0.84	1.00	84.00
12-Apr-89 T A b	Zinc, ICPES	ND 0.020	0.87	1.00	86.90
06-Feb-89 T A m	Zinc, ICPES	ND 0.020	0.98	1.00	98.00
06-Feb-89 T A m	Zinc, ICPES	ND 0.020	0.94	1.00	94.00
07-Feb-89 T A m	Zinc, ICPES	ND 0.020	0.91	1.00	91.00
07-Feb-89 T A m	Zinc, ICPES	ND 0.020	0.91	1.00	91.00
04-Mar-89 T A m	Zinc, ICPES	ND 0.020	0.88	1.00	88.40

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Mar-89 T A m Zinc, ICPES		ND 0.020	0.91	1.00	90.80
08-Mar-89 T A m Zinc, ICPES		ND 0.020	0.75	1.00	74.90
08-Mar-89 T A m Zinc, ICPES		ND 0.020	0.78	1.00	78.40
04-Apr-89 T A m Zinc, ICPES		ND 0.020	0.80	1.00	79.60
04-Apr-89 T A m Zinc, ICPES		ND 0.020	0.76	1.00	75.90
10-Feb-89 T B b Zinc, ICPES		ND 0.020	0.92	1.00	91.80
22-Feb-89 T B b Zinc, ICPES		ND 1.00	0.85	1.00	85.40
07-Feb-89 T B m Zinc, ICPES		ND 0.020	0.82	1.00	82.00
07-Feb-89 T B m Zinc, ICPES		ND 0.020	0.82	1.00	82.00
10-Feb-89 T B m Zinc, ICPES		ND 0.020	0.86	1.00	86.00
10-Feb-89 T B m Zinc, ICPES		ND 0.020	0.85	1.00	84.90
22-Feb-89 T B m Zinc, ICPES		ND 0.20	0.85	1.00	85.00
22-Feb-89 T B m Zinc, ICPES		ND 0.20	0.84	1.00	84.40
27-Feb-89 T B m Zinc, ICPES		ND 0.020	0.93	1.00	93.10
27-Feb-89 T B m Zinc, ICPES		ND 0.020	0.92	1.00	91.60
04-Mar-89 T B m Zinc, ICPES		ND 0.020	0.95	1.00	94.50
04-Mar-89 T B m Zinc, ICPES		ND 0.020	0.91	1.00	90.50
04-Mar-89 T B m Zinc, ICPES		ND 0.020	0.95	1.00	94.70
04-Mar-89 T B m Zinc, ICPES		ND 0.020	0.91	1.00	90.50
04-Apr-89 T B m Zinc, ICPES		ND 0.020	0.83	1.00	83.40
04-Apr-89 T B m Zinc, ICPES		ND 0.020	0.84	1.00	83.50
21-Feb-89 T E b Zinc, ICPES		ND 0.020	0.92	1.00	92.00
21-Feb-89 T E m Zinc, ICPES		ND 0.020	0.77	1.00	77.00
21-Feb-89 T E m Zinc, ICPES		ND 0.020	0.78	1.00	78.00
21-Feb-89 T E m Zinc, ICPES		ND 0.020	0.77	1.00	77.00
21-Feb-89 T E m Zinc, ICPES		ND 0.020	0.78	1.00	78.00
04-Apr-89 T E m Zinc, ICPES		ND 0.020	0.82	1.00	81.60
04-Apr-89 T E m Zinc, ICPES		ND 0.020	0.80	1.00	80.20
04-Apr-89 T E m Zinc, ICPES		ND 0.020	0.80	1.00	80.40
04-Apr-89 T E m Zinc, ICPES		ND 0.020	0.81	1.00	80.80
07-Feb-89 T T b Zinc, ICPES		ND 0.020	0.93	1.00	93.00
04-Apr-89 T T b Zinc, ICPES		ND 0.020	0.92	1.00	91.70
07-Feb-89 T T m Zinc, ICPES		ND 0.020	0.80	1.00	80.00
07-Feb-89 T T m Zinc, ICPES		ND 0.020	0.80	1.00	80.00
07-Feb-89 T T m Zinc, ICPES		ND 0.020	0.81	1.00	81.00
07-Feb-89 T T m Zinc, ICPES		ND 0.020	0.77	1.00	77.00
04-Apr-89 T T m Zinc, ICPES		ND 0.020	0.86	1.00	86.40

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
04-Apr-89 T T m	Zinc, ICPES	ND 0.020	0.84	1.00	83.80
04-Apr-89 T T m	Zinc, ICPES	ND 0.020	0.84	1.00	84.10
04-Apr-89 T T m	Zinc, ICPES	ND 0.020	0.88	1.00	87.80

Number of Samples = 73 Below acceptance = 15
Mean % Recovery = 91 Above acceptance = 4
Standard Deviation = 23.71 Acceptance Criteria 80.00 - 120.00

PCBs					
09-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
09-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	110.0	100.0	110.00
09-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	98.0	100.0	98.00
09-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	95.0	100.0	95.00
09-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	80.0	100.0	80.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	105.0	100.0	105.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	114.0	100.0	114.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	102.0	100.0	102.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	97.0	100.0	97.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	109.0	100.0	109.00
11-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	111.0	100.0	111.00
12-Jan-89 P	s	2,4,5,6-Tetrachlorometaxylene	0.00000	80.0	100.0	80.00
20-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	85.0	100.0	85.00
20-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	85.0	100.0	85.00
20-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	75.0	100.0	75.00
20-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	77.0	100.0	77.00
20-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	83.0	100.0	83.00
20-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	79.0	100.0	79.00
23-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	71.0	100.0	71.00
23-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
27-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	81.0	100.0	81.00
27-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	83.0	100.0	83.00
27-Jan-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	92.0	100.0	92.00
01-Feb-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	108.0	100.0	108.00
01-Feb-89 P B	s	2,4,5,6-Tetrachlorometaxylene	0.00000	84.0	100.0	84.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
01-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	93.0	100.0	93.00
01-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	93.0	100.0	93.00
01-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
01-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
02-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
02-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	96.0	100.0	96.00
02-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	74.0	100.0	74.00
02-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	67.0	100.0	67.00
06-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	78.0	100.0	78.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	68.0	100.0	68.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	73.0	100.0	73.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	120.0	100.0	120.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	63.0	100.0	63.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000		100.0	E
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	94.0	100.0	94.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	68.0	100.0	68.00
07-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	79.0	100.0	79.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	80.0	100.0	80.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	82.0	100.0	82.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	74.0	100.0	74.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	86.0	100.0	86.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	78.0	100.0	78.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	108.0	100.0	108.00
08-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000	84.0	100.0	84.00
09-Feb-89 P B s	2,4,5,6-Tetrachlorometaxylene	0.00000		100.0	E
20-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	97.0	100.0	97.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	100.0	100.0	100.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	102.0	100.0	102.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	109.0	100.0	109.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	93.0	100.0	93.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
23-Jan-89 P E s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	100.0	100.0	100.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	114.0	100.0	114.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	92.0	100.0	92.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	116.0	100.0	116.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	94.0	100.0	94.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	100.0	100.0	100.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
24-Jan-89 P T s	2,4,5,6-Tetrachlorometaxylene	0.00000	102.0	100.0	102.00
09-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	112.0	100.0	112.00
09-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	113.0	100.0	113.00
09-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
09-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	109.0	100.0	109.00
09-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	87.0	100.0	87.00
09-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	110.0	100.0	110.00
10-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	107.0	100.0	107.00
10-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	84.0	100.0	84.00
11-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	112.0	100.0	112.00
11-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	80.0	100.0	80.00
11-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	116.0	100.0	116.00
12-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	66.0	100.0	66.00
12-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	110.0	100.0	110.00
12-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	77.0	100.0	77.00
12-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	98.0	100.0	98.00
12-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	117.0	100.0	117.00
13-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
13-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
21-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	65.0	100.0	65.00
21-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
21-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	95.0	100.0	95.00
21-Feb-89 T s	2,4,5,6-Tetrachlorometaxylene	0.00000	96.0	100.0	96.00
09-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	96.0	100.0	96.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
09-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
09-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	75.0	100.0	75.00
09-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	79.0	100.0	79.00
09-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	95.0	100.0	95.00
09-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	71.0	100.0	71.00
10-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
10-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	71.0	100.0	71.00
10-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	66.0	100.0	66.00
10-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	93.0	100.0	93.00
10-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	64.0	100.0	64.00
10-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
11-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	74.0	100.0	74.00
12-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	72.0	100.0	72.00
12-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
12-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	68.0	100.0	68.00
12-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	83.0	100.0	83.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	101.0	100.0	101.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	92.0	100.0	92.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	95.0	100.0	95.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	7.00	100.0	7.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
13-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	97.0	100.0	97.00
14-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	94.0	100.0	94.00
14-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
14-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	81.0	100.0	81.00
14-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	75.0	100.0	75.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	61.0	100.0	61.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	73.0	100.0	73.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	66.0	100.0	66.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	62.0	100.0	62.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	65.0	100.0	65.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	66.0	100.0	66.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	60.0	100.0	60.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	66.0	100.0	66.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	65.0	100.0	65.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	71.0	100.0	71.00
25-Feb-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	69.0	100.0	69.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	92.0	100.0	92.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	105.0	100.0	105.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	97.0	100.0	97.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	96.0	100.0	96.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	102.0	100.0	102.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	95.0	100.0	95.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	94.0	100.0	94.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	87.0	100.0	87.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	107.0	100.0	107.00
08-Mar-89 T A s	2,4,5,6-Tetrachlorometaxylene	0.00000	84.0	100.0	84.00
14-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	111.0	100.0	111.00
14-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	107.0	100.0	107.00
15-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
15-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	45.0	100.0	45.00
16-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000		100.0	E
16-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	139.0	100.0	139.00
16-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000		100.0	E
16-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	142.0	100.0	142.00
16-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000		100.0	E
21-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	157.0	100.0	157.00
21-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	47.0	100.0	47.00
21-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	146.0	100.0	146.00
21-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	135.0	100.0	135.00
25-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	73.0	100.0	73.00
25-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	67.0	100.0	67.00
27-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	109.0	100.0	109.00
27-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	123.0	100.0	123.00
27-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	82.0	100.0	82.00
27-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
27-Feb-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	82.0	100.0	82.00
01-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	78.0	100.0	78.00
01-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	83.0	100.0	83.00
01-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	81.0	100.0	81.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	85.0	100.0	85.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	100.0	100.0	100.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	76.0	100.0	76.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	102.0	100.0	102.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	92.0	100.0	92.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
03-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	81.0	100.0	81.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	78.0	100.0	78.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	78.0	100.0	78.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	72.0	100.0	72.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	73.0	100.0	73.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	89.0	100.0	89.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	106.0	100.0	106.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	98.0	100.0	98.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	70.0	100.0	70.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	88.0	100.0	88.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	93.0	100.0	93.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00
07-Mar-89 T B s	2,4,5,6-Tetrachlorometaxylene	0.00000	104.0	100.0	104.00
22-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	77.0	100.0	77.00
22-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	73.0	100.0	73.00
22-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	67.0	100.0	67.00
22-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	76.0	100.0	76.00
22-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	78.0	100.0	78.00
22-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	82.0	100.0	82.00
23-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	116.0	100.0	116.00
23-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	136.0	100.0	136.00
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	124.0	100.0	124.00
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	58.0	100.0	58.00
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	125.0	100.0	125.00
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	56.0	100.0	56.00
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	1.00	100.0	1.00
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	44.0	100.0	44.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
24-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	59.0	100.0	59.00
27-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	76.0	100.0	76.00
27-Feb-89 T E s	2,4,5,6-Tetrachlorometaxylene	0.00000	80.0	100.0	80.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	85.0	100.0	85.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	137.0	100.0	137.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	146.0	100.0	146.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	144.0	100.0	144.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	79.0	100.0	79.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	138.0	100.0	138.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	79.0	100.0	79.00
12-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	144.0	100.0	144.00
21-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	48.0	100.0	48.00
21-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	92.0	100.0	92.00
22-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	90.0	100.0	90.00
22-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	96.0	100.0	96.00
22-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	99.0	100.0	99.00
22-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	97.0	100.0	97.00
22-Feb-89 T T s	2,4,5,6-Tetrachlorometaxylene	0.00000	91.0	100.0	91.00

Number of Samples = 231
Mean % Recovery = 88
Standard Deviation = 24.41

Below acceptance = 7
Above acceptance = 1
Acceptance Criteria 17.00 - 152.00

09-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
09-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
09-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
09-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
09-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C
11-Jan-89 P	s	Dibutylchlorendate	0.00000	100.0	C

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
12-Jan-89 P s	Dibutylchlorendate	0.00000		100.0	C
20-Jan-89 P B s	Dibutylchlorendate	0.00000	83.0	100.0	83.00
20-Jan-89 P B s	Dibutylchlorendate	0.00000	82.0	100.0	82.00
20-Jan-89 P B s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
20-Jan-89 P B s	Dibutylchlorendate	0.00000	82.0	100.0	82.00
20-Jan-89 P B s	Dibutylchlorendate	0.00000	80.0	100.0	80.00
20-Jan-89 P B s	Dibutylchlorendate	0.00000	74.0	100.0	74.00
23-Jan-89 P B s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
23-Jan-89 P B s	Dibutylchlorendate	0.00000	88.0	100.0	88.00
27-Jan-89 P B s	Dibutylchlorendate	0.00000	69.0	100.0	69.00
27-Jan-89 P B s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
27-Jan-89 P B s	Dibutylchlorendate	0.00000	72.0	100.0	72.00
01-Feb-89 P B s	Dibutylchlorendate	0.00000	67.0	100.0	67.00
01-Feb-89 P B s	Dibutylchlorendate	0.00000	70.0	100.0	70.00
01-Feb-89 P B s	Dibutylchlorendate	0.00000	58.0	100.0	58.00
01-Feb-89 P B s	Dibutylchlorendate	0.00000	73.0	100.0	73.00
01-Feb-89 P B s	Dibutylchlorendate	0.00000	68.0	100.0	68.00
01-Feb-89 P B s	Dibutylchlorendate	0.00000	62.0	100.0	62.00
02-Feb-89 P B s	Dibutylchlorendate	0.00000	77.0	100.0	77.00
02-Feb-89 P B s	Dibutylchlorendate	0.00000	71.0	100.0	71.00
02-Feb-89 P B s	Dibutylchlorendate	0.00000	48.0	100.0	48.00
02-Feb-89 P B s	Dibutylchlorendate	0.00000	50.0	100.0	50.00
06-Feb-89 P B s	Dibutylchlorendate	0.00000	74.0	100.0	74.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	66.0	100.0	66.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	91.0	100.0	91.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	64.0	100.0	64.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	76.0	100.0	76.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	73.0	100.0	73.00
07-Feb-89 P B s	Dibutylchlorendate	0.00000	100.0	100.0	100.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	71.0	100.0	71.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	87.0	100.0	87.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	76.0	100.0	76.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	84.0	100.0	84.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	83.0	100.0	83.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
08-Feb-89 P B s	Dibutylchlorendate	0.00000	91.0	100.0	91.00
08-Feb-89 P B s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
09-Feb-89 P B s	Dibutylchlorendate	0.00000	94.0	100.0	94.00
20-Jan-89 P E s	Dibutylchlorendate	0.00000	88.0	100.0	88.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	94.0	100.0	94.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	76.0	100.0	76.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	101.0	100.0	101.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	85.0	100.0	85.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	87.0	100.0	87.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	84.0	100.0	84.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	88.0	100.0	88.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	87.0	100.0	87.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	85.0	100.0	85.00
23-Jan-89 P E s	Dibutylchlorendate	0.00000	85.0	100.0	85.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	103.0	100.0	103.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	95.0	100.0	95.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	82.0	100.0	82.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	107.0	100.0	107.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	99.0	100.0	99.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	78.0	100.0	78.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	105.0	100.0	105.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	89.0	100.0	89.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	91.0	100.0	91.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	101.0	100.0	101.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
24-Jan-89 P T s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
09-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
09-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
09-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
09-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
09-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	
09-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
10-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
10-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
11-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
11-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
11-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
12-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
12-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
12-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
12-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
12-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
13-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
13-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
21-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
21-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
21-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
21-Feb-89 T s	Dibutylchlorendate	0.00000		100.0	C
09-Feb-89 T A s	Dibutylchlorendate	0.00000	78.0	100.0	78.00
09-Feb-89 T A s	Dibutylchlorendate	0.00000	72.0	100.0	72.00
09-Feb-89 T A s	Dibutylchlorendate	0.00000	88.0	100.0	88.00
09-Feb-89 T A s	Dibutylchlorendate	0.00000	83.0	100.0	83.00
09-Feb-89 T A s	Dibutylchlorendate	0.00000	89.0	100.0	89.00
09-Feb-89 T A s	Dibutylchlorendate	0.00000	90.0	100.0	90.00
10-Feb-89 T A s	Dibutylchlorendate	0.00000	94.0	100.0	94.00
10-Feb-89 T A s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
10-Feb-89 T A s	Dibutylchlorendate	0.00000	85.0	100.0	85.00
10-Feb-89 T A s	Dibutylchlorendate	0.00000	91.0	100.0	91.00
10-Feb-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
10-Feb-89 T A s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
11-Feb-89 T A s	Dibutylchlorendate	0.00000	89.0	100.0	89.00
12-Feb-89 T A s	Dibutylchlorendate	0.00000	90.0	100.0	90.00
12-Feb-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
12-Feb-89 T A s	Dibutylchlorendate	0.00000	106.0	100.0	106.00
12-Feb-89 T A s	Dibutylchlorendate	0.00000	84.0	100.0	84.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	8.00	100.0	8.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	101.0	100.0	101.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	94.0	100.0	94.00
13-Feb-89 T A s	Dibutylchlorendate	0.00000	100.0	100.0	100.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
14-Feb-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
14-Feb-89 T A s	Dibutylchlorendate	0.00000	99.0	100.0	99.00
14-Feb-89 T A s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
14-Feb-89 T A s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	104.0	100.0	104.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	103.0	100.0	103.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	95.0	100.0	95.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	100.0	100.0	100.00
25-Feb-89 T A s	Dibutylchlorendate	0.00000	112.0	100.0	112.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	89.0	100.0	89.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	99.0	100.0	99.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	102.0	100.0	102.00
08-Mar-89 T A s	Dibutylchlorendate	0.00000	100.0	100.0	100.00
14-Feb-89 T B s	Dibutylchlorendate	0.00000	94.0	100.0	94.00
14-Feb-89 T B s	Dibutylchlorendate	0.00000	92.0	100.0	92.00
15-Feb-89 T B s	Dibutylchlorendate	0.00000	87.0	100.0	87.00
15-Feb-89 T B s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
16-Feb-89 T B s	Dibutylchlorendate	0.00000	82.0	100.0	82.00
16-Feb-89 T B s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
16-Feb-89 T B s	Dibutylchlorendate	0.00000	92.0	100.0	92.00
16-Feb-89 T B s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
16-Feb-89 T B s	Dibutylchlorendate	0.00000	94.0	100.0	94.00
21-Feb-89 T B s	Dibutylchlorendate	0.00000	87.0	100.0	87.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
21-Feb-89 T B s	Dibutylchlorendate	0.00000	102.0	100.0	102.00
21-Feb-89 T B s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
21-Feb-89 T B s	Dibutylchlorendate	0.00000	96.0	100.0	96.00
25-Feb-89 T B s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
25-Feb-89 T B s	Dibutylchlorendate	0.00000	111.0	100.0	111.00
27-Feb-89 T B s	Dibutylchlorendate	0.00000	109.0	100.0	109.00
27-Feb-89 T B s	Dibutylchlorendate	0.00000	101.0	100.0	101.00
27-Feb-89 T B s	Dibutylchlorendate	0.00000	108.0	100.0	108.00
27-Feb-89 T B s	Dibutylchlorendate	0.00000	111.0	100.0	111.00
27-Feb-89 T B s	Dibutylchlorendate	0.00000	100.0	100.0	100.00
01-Mar-89 T B s	Dibutylchlorendate	0.00000	63.0	100.0	63.00
01-Mar-89 T B s	Dibutylchlorendate	0.00000	67.0	100.0	67.00
01-Mar-89 T B s	Dibutylchlorendate	0.00000	62.0	100.0	62.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	77.0	100.0	77.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	64.0	100.0	64.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	54.0	100.0	54.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	67.0	100.0	67.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	80.0	100.0	80.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	89.0	100.0	89.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	70.0	100.0	70.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	66.0	100.0	66.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	72.0	100.0	72.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	64.0	100.0	64.00
03-Mar-89 T B s	Dibutylchlorendate	0.00000	50.0	100.0	50.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	78.0	100.0	78.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	58.0	100.0	58.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	75.0	100.0	75.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	79.0	100.0	79.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	92.0	100.0	92.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	49.0	100.0	49.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	91.0	100.0	91.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	90.0	100.0	90.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	62.0	100.0	62.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	92.0	100.0	92.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	64.0	100.0	64.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	79.0	100.0	79.00
07-Mar-89 T B s	Dibutylchlorendate	0.00000	59.0	100.0	59.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
22-Feb-89 T E s	Dibutylchlorendate	0.00000	87.0	100.0	87.00
22-Feb-89 T E s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
22-Feb-89 T E s	Dibutylchlorendate	0.00000	88.0	100.0	88.00
22-Feb-89 T E s	Dibutylchlorendate	0.00000	82.0	100.0	82.00
22-Feb-89 T E s	Dibutylchlorendate	0.00000	66.0	100.0	66.00
22-Feb-89 T E s	Dibutylchlorendate	0.00000	64.0	100.0	64.00
23-Feb-89 T E s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
23-Feb-89 T E s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	85.0	100.0	85.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	75.0	100.0	75.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	99.0	100.0	99.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	78.0	100.0	78.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	49.0	100.0	49.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	95.0	100.0	95.00
24-Feb-89 T E s	Dibutylchlorendate	0.00000	2.00	100.0	2.00
27-Feb-89 T E s	Dibutylchlorendate	0.00000	81.0	100.0	81.00
27-Feb-89 T E s	Dibutylchlorendate	0.00000	86.0	100.0	86.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	85.0	100.0	85.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	92.0	100.0	92.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	95.0	100.0	95.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	91.0	100.0	91.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	79.0	100.0	79.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	93.0	100.0	93.00
12-Feb-89 T T s	Dibutylchlorendate	0.00000	102.0	100.0	102.00
21-Feb-89 T T s	Dibutylchlorendate	0.00000	95.0	100.0	95.00
21-Feb-89 T T s	Dibutylchlorendate	0.00000	97.0	100.0	97.00
22-Feb-89 T T s	Dibutylchlorendate	0.00000	101.0	100.0	101.00
22-Feb-89 T T s	Dibutylchlorendate	0.00000	100.0	100.0	100.00
22-Feb-89 T T s	Dibutylchlorendate	0.00000	98.0	100.0	98.00
22-Feb-89 T T s	Dibutylchlorendate	0.00000	99.0	100.0	99.00

Number of Samples = 230
Mean % Recovery = 72
Standard Deviation = 33.97

Below acceptance = 37
Above acceptance = 0
Acceptance Criteria 20.00 - 150.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
23-Jan-89 P m PCB-1254		0.00000	67.0	100.0	67.00
24-Jan-89 P m PCB-1254		0.00000	100.0	100.0	100.00
27-Jan-89 P m PCB-1254		0.00000	89.0	100.0	89.00
08-Feb-89 P B m PCB-1254		0.00000	94.0	100.0	94.00
08-Feb-89 P B m PCB-1254		0.00000	95.0	100.0	95.00
24-Jan-89 P T m PCB-1254		0.00000	141.0	100.0	141.00
24-Jan-89 P T m PCB-1254		0.00000	150.0	100.0	150.00
11-Feb-89 T m PCB-1254		0.00000	55.0	100.0	55.00
12-Feb-89 T m PCB-1254		0.00000		100.0	0
12-Feb-89 T m PCB-1254		0.00000		100.0	0
10-Feb-89 T A m PCB-1254		0.00000	124.0	100.0	124.00
13-Feb-89 T A m PCB-1254		0.00000	11.0	100.0	11.00
14-Feb-89 T A m PCB-1254		0.00000	90.0	100.0	90.00
14-Feb-89 T A m PCB-1254		0.00000	85.0	100.0	85.00
25-Feb-89 T A m PCB-1254		0.00000	102.0	100.0	102.00
25-Feb-89 T A m PCB-1254		0.00000	95.0	100.0	95.00
21-Feb-89 T B m PCB-1254		0.00000	104.0	100.0	104.00
21-Feb-89 T B m PCB-1254		0.00000	111.0	100.0	111.00
27-Feb-89 T B m PCB-1254		0.00000	112.0	100.0	112.00
27-Feb-89 T B m PCB-1254		0.00000	124.0	100.0	124.00
07-Mar-89 T B m PCB-1254		0.00000	111.0	100.0	111.00
07-Mar-89 T B m PCB-1254		0.00000	108.0	100.0	108.00
24-Feb-89 T E m PCB-1254		0.00000	127.0	100.0	127.00
24-Feb-89 T E m PCB-1254		0.00000	135.0	100.0	135.00
27-Feb-89 T E m PCB-1254		0.00000	107.0	100.0	107.00
27-Feb-89 T E m PCB-1254		0.00000	105.0	100.0	105.00
22-Feb-89 T T m PCB-1254		0.00000	113.0	100.0	113.00
22-Feb-89 T T m PCB-1254		0.00000	122.0	100.0	122.00

Number of Samples = 28
Mean % Recovery = 95
Standard Deviation = 38.25

Below acceptance = 3
Above acceptance = 3
Acceptance Criteria 29.00 - 131.00

11-Jan-89 P m PCB-1260	0.00000	77.0	100.0	77.00
11-Jan-89 P m PCB-1260	0.00000	90.0	100.0	90.00
21-Feb-89 T m PCB-1260	0.00000	101.0	100.0	101.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
PCBs					
21-Feb-89 T m	PCB-1260	0.00000	89.0	100.0	89.00

Number of Samples = 4
Mean % Recovery = 89
Standard Deviation = 9.81
Below acceptance = 0
Above acceptance = 0
Acceptance Criteria 8.00 - 127.00

Volatile Organics					
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	96.0	100.0	96.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	98.0	100.0	98.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	98.0	100.0	98.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	97.0	100.0	97.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	95.0	100.0	95.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	96.0	100.0	96.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	95.0	100.0	95.00
15-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	102.0	100.0	102.00
16-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	100.0	100.0	100.00
16-Dec-88 P s	1,2-Dichloroethane-d4	0.00000	101.0	100.0	101.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	102.0	100.0	102.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	104.0	100.0	104.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	106.0	100.0	106.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	104.0	100.0	104.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	100.0	100.0	100.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	102.0	100.0	102.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	101.0	100.0	101.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	110.0	100.0	110.00
16-Jan-89 P T s	1,2-Dichloroethane-d4	0.00000	101.0	100.0	101.00
24-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	102.0	100.0	102.00
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	92.0	100.0	92.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics					
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	88.0	100.0	88.00
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	95.0	100.0	95.00
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	92.0	100.0	92.00
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	87.0	100.0	87.00
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	80.0	100.0	80.00
25-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	85.0	100.0	85.00
26-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	88.0	100.0	88.00
26-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	83.0	100.0	83.00
27-Jan-89 T s	1,2-Dichloroethane-d4	0.00000	101.0	100.0	101.00
04-Feb-89 T s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
06-Feb-89 T s	1,2-Dichloroethane-d4	0.00000	98.0	100.0	98.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	104.0	100.0	104.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	104.0	100.0	104.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	95.0	100.0	95.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	101.0	100.0	101.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	101.0	100.0	101.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
04-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	103.0	100.0	103.00
06-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	96.0	100.0	96.00
06-Feb-89 T T s	1,2-Dichloroethane-d4	0.00000	102.0	100.0	102.00

Number of Samples = 52 — Below acceptance = 0
Mean % Recovery = 98 — Above acceptance = 0
Standard Deviation = 5.98 — Acceptance Criteria 76.00 - 114.00

15-Dec-88 P s	BFB	0.00000	93.0	100.0	93.00
15-Dec-88 P s	BFB	0.00000	93.0	100.0	93.00
15-Dec-88 P s	BFB	0.00000	94.0	100.0	94.00
15-Dec-88 P s	BFB	0.00000	92.0	100.0	92.00
15-Dec-88 P s	BFB	0.00000	94.0	100.0	94.00
15-Dec-88 P s	BFB	0.00000	91.0	100.0	91.00
15-Dec-88 P s	BFB	0.00000	93.0	100.0	93.00
15-Dec-88 P s	BFB	0.00000	94.0	100.0	94.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics					
15-Dec-88 P s BFB		0.00000	99.0	100.0	99.00
15-Dec-88 P s BFB		0.00000	93.0	100.0	93.00
15-Dec-88 P s BFB		0.00000	96.0	100.0	96.00
15-Dec-88 P s BFB		0.00000	96.0	100.0	96.00
16-Dec-88 P s BFB		0.00000	93.0	100.0	93.00
16-Dec-88 P s BFB		0.00000	94.0	100.0	94.00
16-Jan-89 P T s BFB		0.00000	92.0	100.0	92.00
16-Jan-89 P T s BFB		0.00000	95.0	100.0	95.00
16-Jan-89 P T s BFB		0.00000	89.0	100.0	89.00
16-Jan-89 P T s BFB		0.00000	94.0	100.0	94.00
16-Jan-89 P T s BFB		0.00000	92.0	100.0	92.00
16-Jan-89 P T s BFB		0.00000	93.0	100.0	93.00
16-Jan-89 P T s BFB		0.00000	94.0	100.0	94.00
16-Jan-89 P T s BFB		0.00000	91.0	100.0	91.00
16-Jan-89 P T s BFB		0.00000	90.0	100.0	90.00
16-Jan-89 P T s BFB		0.00000	98.0	100.0	98.00
16-Jan-89 P T s BFB		0.00000	92.0	100.0	92.00
16-Jan-89 P T s BFB		0.00000	95.0	100.0	95.00
24-Jan-89 T s BFB		0.00000	95.0	100.0	95.00
25-Jan-89 T s BFB		0.00000	70.0	100.0	70.00
25-Jan-89 T s BFB		0.00000	77.0	100.0	77.00
25-Jan-89 T s BFB		0.00000	76.0	100.0	76.00
25-Jan-89 T s BFB		0.00000	92.0	100.0	92.00
25-Jan-89 T s BFB		0.00000	59.0	100.0	59.00
25-Jan-89 T s BFB		0.00000	63.0	100.0	63.00
25-Jan-89 T s BFB		0.00000	75.0	100.0	75.00
26-Jan-89 T s BFB		0.00000	60.0	100.0	60.00
26-Jan-89 T s BFB		0.00000	54.0	100.0	54.00
27-Jan-89 T s BFB		0.00000	139.0	100.0	139.00
04-Feb-89 T s BFB		0.00000	93.0	100.0	93.00
06-Feb-89 T s BFB		0.00000	94.0	100.0	94.00
04-Feb-89 T T s BFB		0.00000	86.0	100.0	86.00
04-Feb-89 T T s BFB		0.00000	93.0	100.0	93.00
04-Feb-89 T T s BFB		0.00000	89.0	100.0	89.00
04-Feb-89 T T s BFB		0.00000	91.0	100.0	91.00
04-Feb-89 T T s BFB		0.00000	88.0	100.0	88.00
04-Feb-89 T T s BFB		0.00000	92.0	100.0	92.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics					
04-Feb-89 T T s BFB		0.00000	90.0	100.0	90.00
04-Feb-89 T T s BFB		0.00000	93.0	100.0	93.00
04-Feb-89 T T s BFB		0.00000	90.0	100.0	90.00
04-Feb-89 T T s BFB		0.00000	93.0	100.0	93.00
04-Feb-89 T T s BFB		0.00000	92.0	100.0	92.00
04-Feb-89 T T s BFB		0.00000	90.0	100.0	90.00
06-Feb-89 T T s BFB		0.00000	92.0	100.0	92.00
Number of Samples = 52			Below acceptance = 8		
Mean % Recovery = 89			Above acceptance = 1		
Standard Deviation = 12.38			Acceptance Criteria 86.00 - 115.00		
15-Dec-88 P s d8-toluene		0.00000	101.0	100.0	101.00
15-Dec-88 P s d8-toluene		0.00000	98.0	100.0	98.00
15-Dec-88 P s d8-toluene		0.00000	102.0	100.0	102.00
15-Dec-88 P s d8-toluene		0.00000	101.0	100.0	101.00
15-Dec-88 P s d8-toluene		0.00000	102.0	100.0	102.00
15-Dec-88 P s d8-toluene		0.00000	97.0	100.0	97.00
15-Dec-88 P s d8-toluene		0.00000	97.0	100.0	97.00
15-Dec-88 P s d8-toluene		0.00000	99.0	100.0	99.00
15-Dec-88 P s d8-toluene		0.00000	104.0	100.0	104.00
15-Dec-88 P s d8-toluene		0.00000	102.0	100.0	102.00
15-Dec-88 P s d8-toluene		0.00000	102.0	100.0	102.00
15-Dec-88 P s d8-toluene		0.00000	99.0	100.0	99.00
16-Dec-88 P s d8-toluene		0.00000	95.0	100.0	95.00
16-Dec-88 P s d8-toluene		0.00000	98.0	100.0	98.00
16-Jan-89 P T s d8-toluene		0.00000	96.0	100.0	96.00
16-Jan-89 P T s d8-toluene		0.00000	94.0	100.0	94.00
16-Jan-89 P T s d8-toluene		0.00000	96.0	100.0	96.00
16-Jan-89 P T s d8-toluene		0.00000	97.0	100.0	97.00
16-Jan-89 P T s d8-toluene		0.00000	93.0	100.0	93.00
16-Jan-89 P T s d8-toluene		0.00000	96.0	100.0	96.00
16-Jan-89 P T s d8-toluene		0.00000	95.0	100.0	95.00
16-Jan-89 P T s d8-toluene		0.00000	93.0	100.0	93.00
16-Jan-89 P T s d8-toluene		0.00000	86.0	100.0	86.00
16-Jan-89 P T s d8-toluene		0.00000	89.0	100.0	89.00
16-Jan-89 P T s d8-toluene		0.00000	95.0	100.0	95.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics, Matrix Spike					
25-Jan-89 T	m 1,1-Dichloroethene	0.00000	75.0	100.0	75.00
25-Jan-89 T	m 1,1-Dichloroethene	0.00000	74.0	100.0	74.00
06-Feb-89 T T	m 1,1-Dichloroethene	0.00000	52.0	100.0	52.00
06-Feb-89 T T	m 1,1-Dichloroethene	0.00000	54.0	100.0	54.00
06-Feb-89 T T	m 1,1-Dichloroethene	0.00000	53.0	100.0	53.00
06-Feb-89 T T	m 1,1-Dichloroethene	0.00000	56.0	100.0	56.00
Number of Samples = 8			Below acceptance = 0		
Mean % Recovery = 66			Above acceptance = 0		
Standard Deviation = 14.15			Acceptance Criteria .00 - 234.00		
16-Dec-88 P	s 1,2-Dichloroethane-d4	0.00000	99.0	100.0	99.00
16-Dec-88 P	s 1,2-Dichloroethane-d4	0.00000	97.0	100.0	97.00
25-Jan-89 T	s 1,2-Dichloroethane-d4	0.00000	98.0	100.0	98.00
25-Jan-89 T	s 1,2-Dichloroethane-d4	0.00000	98.0	100.0	98.00
06-Feb-89 T T	s 1,2-Dichloroethane-d4	0.00000	96.0	100.0	96.00
06-Feb-89 T T	s 1,2-Dichloroethane-d4	0.00000	94.0	100.0	94.00
06-Feb-89 T T	s 1,2-Dichloroethane-d4	0.00000	94.0	100.0	94.00
06-Feb-89 T T	s 1,2-Dichloroethane-d4	0.00000	95.0	100.0	95.00
Number of Samples = 8			Below acceptance = 0		
Mean % Recovery = 96			Above acceptance = 0		
Standard Deviation = 1.92			Acceptance Criteria 76.00 - 114.00		
16-Dec-88 P	m Benzene	0.00000	100.0	100.0	100.00
16-Dec-88 P	m Benzene	0.00000	86.0	100.0	86.00
25-Jan-89 T	m Benzene	0.00000	76.0	100.0	76.00
25-Jan-89 T	m Benzene	0.00000	74.0	100.0	74.00
06-Feb-89 T T	m Benzene	0.00000	69.0	100.0	69.00
06-Feb-89 T T	m Benzene	0.00000	69.0	100.0	69.00
06-Feb-89 T T	m Benzene	0.00000	78.0	100.0	78.00
06-Feb-89 T T	m Benzene	0.00000	74.0	100.0	74.00
Number of Samples = 8			Below acceptance = 0		
Mean % Recovery = 78			Above acceptance = 0		
Standard Deviation = 10.31			Acceptance Criteria 37.00 - 151.00		

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics					
16-Jan-89 P T s d8-toluene		0.00000	95.0	100.0	95.00
24-Jan-89 T s d8-toluene		0.00000	98.0	100.0	98.00
25-Jan-89 T s d8-toluene		0.00000	58.0	100.0	58.00
25-Jan-89 T s d8-toluene		0.00000	61.0	100.0	61.00
25-Jan-89 T s d8-toluene		0.00000	49.0	100.0	49.00
25-Jan-89 T s d8-toluene		0.00000	48.0	100.0	48.00
25-Jan-89 T s d8-toluene		0.00000	45.0	100.0	45.00
25-Jan-89 T s d8-toluene		0.00000	64.0	100.0	64.00
25-Jan-89 T s d8-toluene		0.00000	48.0	100.0	48.00
26-Jan-89 T s d8-toluene		0.00000	43.0	100.0	43.00
26-Jan-89 T s d8-toluene		0.00000	47.0	100.0	47.00
27-Jan-89 T s d8-toluene		0.00000	64.0	100.0	64.00
04-Feb-89 T s d8-toluene		0.00000	99.0	100.0	99.00
06-Feb-89 T s d8-toluene		0.00000	102.0	100.0	102.00
04-Feb-89 T T s d8-toluene		0.00000	93.0	100.0	93.00
04-Feb-89 T T s d8-toluene		0.00000	100.0	100.0	100.00
04-Feb-89 T T s d8-toluene		0.00000	93.0	100.0	93.00
04-Feb-89 T T s d8-toluene		0.00000	100.0	100.0	100.00
04-Feb-89 T T s d8-toluene		0.00000	94.0	100.0	94.00
04-Feb-89 T T s d8-toluene		0.00000	97.0	100.0	97.00
04-Feb-89 T T s d8-toluene		0.00000	98.0	100.0	98.00
04-Feb-89 T T s d8-toluene		0.00000	98.0	100.0	98.00
04-Feb-89 T T s d8-toluene		0.00000	99.0	100.0	99.00
04-Feb-89 T T s d8-toluene		0.00000	98.0	100.0	98.00
04-Feb-89 T T s d8-toluene		0.00000	98.0	100.0	98.00
06-Feb-89 T T s d8-toluene		0.00000	102.0	100.0	102.00
06-Feb-89 T T s d8-toluene		0.00000	99.0	100.0	99.00

Number of Samples = 52
Mean % Recovery = 88
Standard Deviation = 18.40

Below acceptance = 11
Above acceptance = 0
Acceptance Criteria 88.00 - 110.00

Volatile Organics, Matrix Spike					
16-Dec-88 P m 1,1-Dichloroethene		0.00000	89.0	100.0	89.00
16-Dec-88 P m 1,1-Dichloroethene		0.00000	77.0	100.0	77.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics, Matrix Spike					
16-Dec-88 P m	Chlorobenzene	0.00000	98.0	100.0	98.00
16-Dec-88 P m	Chlorobenzene	0.00000	116.0	100.0	116.00
25-Jan-89 T m	Chlorobenzene	0.00000	100.0	100.0	100.00
25-Jan-89 T m	Chlorobenzene	0.00000	105.0	100.0	105.00
06-Feb-89 T T m	Chlorobenzene	0.00000	111.0	100.0	111.00
06-Feb-89 T T m	Chlorobenzene	0.00000	103.0	100.0	103.00
06-Feb-89 T T m	Chlorobenzene	0.00000	103.0	100.0	103.00
06-Feb-89 T T m	Chlorobenzene	0.00000	98.0	100.0	98.00
Number of Samples = 8			Below acceptance = 0		
Mean % Recovery = 104			Above acceptance = 0		
Standard Deviation = 6.36			Acceptance Criteria 37.00 - 160.00		
16-Dec-88 P m	Toluene	0.00000	79.0	100.0	79.00
16-Dec-88 P m	Toluene	0.00000	110.0	100.0	110.00
25-Jan-89 T m	Toluene	0.00000	52.0	100.0	52.00
25-Jan-89 T m	Toluene	0.00000	74.0	100.0	74.00
06-Feb-89 T T m	Toluene	0.00000	90.0	100.0	90.00
06-Feb-89 T T m	Toluene	0.00000	64.0	100.0	64.00
06-Feb-89 T T m	Toluene	0.00000	73.0	100.0	73.00
06-Feb-89 T T m	Toluene	0.00000	92.0	100.0	92.00
Number of Samples = 8			Below acceptance = 0		
Mean % Recovery = 79			Above acceptance = 0		
Standard Deviation = 17.99			Acceptance Criteria 47.00 - 150.00		
16-Dec-88 P s	Toluene-d8	0.00000	97.0	100.0	97.00
16-Dec-88 P s	Toluene-d8	0.00000	97.0	100.0	97.00
25-Jan-89 T s	Toluene-d8	0.00000	87.0	100.0	87.00
25-Jan-89 T s	Toluene-d8	0.00000	89.0	100.0	89.00
06-Feb-89 T T s	Toluene-d8	0.00000	98.0	100.0	98.00
06-Feb-89 T T s	Toluene-d8	0.00000	99.0	100.0	99.00
06-Feb-89 T T s	Toluene-d8	0.00000	100.0	100.0	100.00
06-Feb-89 T T s	Toluene-d8	0.00000	98.0	100.0	98.00
Number of Samples = 8			Below acceptance = 1		
Mean % Recovery = 95			Above acceptance = 0		

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = SET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Volatile Organics, Matrix Spike					
Standard Deviation = 4.83			Acceptance Criteria 88.00 - 110.00		
16-Dec-88 P	m Trichloroethene	0.00000	111.0	100.0	111.00
16-Dec-88 P	m Trichloroethene	0.00000	88.0	100.0	88.00
25-Jan-89 T	m Trichloroethene	0.00000	86.0	100.0	86.00
25-Jan-89 T	m Trichloroethene	0.00000	94.0	100.0	94.00
06-Feb-89 T T	m Trichloroethene	0.00000	91.0	100.0	91.00
06-Feb-89 T T	m Trichloroethene	0.00000	96.0	100.0	96.00
06-Feb-89 T T	m Trichloroethene	0.00000	106.0	100.0	106.00
06-Feb-89 T T	m Trichloroethene	0.00000	95.0	100.0	95.00
Number of Samples = 8			Below acceptance = 0		
Mean % Recovery = 95			Above acceptance = 0		
Standard Deviation = 8.60			Acceptance Criteria 71.00 - 157.00		
16-Dec-88 P	s p-Bromofluorobenzene	0.00000	99.0	100.0	99.00
16-Dec-88 P	s p-Bromofluorobenzene	0.00000	98.0	100.0	98.00
25-Jan-89 T	s p-Bromofluorobenzene	0.00000	76.0	100.0	76.00
25-Jan-89 T	s p-Bromofluorobenzene	0.00000	76.0	100.0	76.00
06-Feb-89 T T	s p-Bromofluorobenzene	0.00000	91.0	100.0	91.00
06-Feb-89 T T	s p-Bromofluorobenzene	0.00000	94.0	100.0	94.00
06-Feb-89 T T	s p-Bromofluorobenzene	0.00000	93.0	100.0	93.00
06-Feb-89 T T	s p-Bromofluorobenzene	0.00000	92.0	100.0	92.00
Number of Samples = 8			Below acceptance = 2		
Mean % Recovery = 89			Above acceptance = 0		
Standard Deviation = 8.99			Acceptance Criteria 86.00 - 115.00		
Semivolatile Organics					
09-Jan-89 P	s 2,4,6-Tribromophenol	0.00000	110.0	100.0	110.00
09-Jan-89 P	s 2,4,6-Tribromophenol	0.00000	101.0	100.0	101.00
09-Jan-89 P	s 2,4,6-Tribromophenol	0.00000	106.0	100.0	106.00
09-Jan-89 P	s 2,4,6-Tribromophenol	0.00000	110.0	100.0	110.00
09-Jan-89 P	s 2,4,6-Tribromophenol	0.00000	114.0	100.0	114.00
09-Jan-89 P	s 2,4,6-Tribromophenol	0.00000	111.0	100.0	111.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
09-Jan-89 P s	2,4,6-Tribromophenol	0.00000	106.0	100.0	106.00
09-Jan-89 P s	2,4,6-Tribromophenol	0.00000	100.0	100.0	100.00
09-Jan-89 P s	2,4,6-Tribromophenol	0.00000	119.0	100.0	119.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	62.0	100.0	62.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	91.0	100.0	91.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	106.0	100.0	106.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	94.0	100.0	94.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	110.0	100.0	110.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	91.0	100.0	91.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	99.0	100.0	99.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	95.0	100.0	95.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	90.0	100.0	90.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	100.0	100.0	100.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	83.0	100.0	83.00
23-Jan-89 P T s	2,4,6-Tribromophenol	0.00000	93.0	100.0	93.00
09-Jan-89 T s	2,4,6-Tribromophenol	0.00000	88.0	100.0	88.00
03-Feb-89 T s	2,4,6-Tribromophenol	0.00000	37.0	100.0	37.00
03-Feb-89 T s	2,4,6-Tribromophenol	0.00000	60.0	100.0	60.00
03-Feb-89 T s	2,4,6-Tribromophenol	0.00000	113.0	100.0	113.00
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000	65.0	100.0	65.00
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000		100.0	NR
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000		100.0	NR
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000	37.0	100.0	37.00
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000	54.0	100.0	54.00
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000	48.0	100.0	48.00
07-Feb-89 T s	2,4,6-Tribromophenol	0.00000	33.0	100.0	33.00
07-Feb-89 T s	2,4,6-Tribromophenol	0.00000	41.0	100.0	41.00
07-Feb-89 T s	2,4,6-Tribromophenol	0.00000	89.0	100.0	89.00
07-Feb-89 T s	2,4,6-Tribromophenol	0.00000	32.0	100.0	32.00
08-Feb-89 T s	2,4,6-Tribromophenol	0.00000	49.0	100.0	49.00
07-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	103.0	100.0	103.00
07-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	122.0	100.0	122.00
07-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	120.0	100.0	120.00
07-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	100.0	100.0	100.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	108.0	100.0	108.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	98.0	100.0	98.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	15.0	100.0	15.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	16.0	100.0	16.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	14.0	100.0	14.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	19.0	100.0	19.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	111.0	100.0	111.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	117.0	100.0	117.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	107.0	100.0	107.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	12.0	100.0	12.00
Number of Samples = 50			Below acceptance = 2		
Mean % Recovery = 77			Above acceptance = 0		
Standard Deviation = 37.13			Acceptance Criteria 10.00 - 123.00		
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	92.0	100.0	92.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	90.0	100.0	90.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	93.0	100.0	93.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	92.0	100.0	92.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	56.0	100.0	56.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	88.0	100.0	88.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	96.0	100.0	96.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	89.0	100.0	89.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	91.0	100.0	91.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	75.0	100.0	75.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	78.0	100.0	78.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	75.0	100.0	75.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	84.0	100.0	84.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	80.0	100.0	80.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	86.0	100.0	86.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	79.0	100.0	79.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	83.0	100.0	83.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	80.0	100.0	80.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	79.0	100.0	79.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	75.0	100.0	75.00
23-Jan-89 P T s	2-Fluorobiphenyl	0.00000	80.0	100.0	80.00
09-Jan-89 T s	2-Fluorobiphenyl	0.00000	94.0	100.0	94.00
03-Feb-89 T s	2-Fluorobiphenyl	0.00000	93.0	100.0	93.00
03-Feb-89 T s	2-Fluorobiphenyl	0.00000	94.0	100.0	94.00
03-Feb-89 T s	2-Fluorobiphenyl	0.00000	105.0	100.0	105.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	90.0	100.0	90.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	91.0	100.0	91.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	91.0	100.0	91.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	86.0	100.0	86.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	88.0	100.0	88.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	99.0	100.0	99.00
07-Feb-89 T s	2-Fluorobiphenyl	0.00000	92.0	100.0	92.00
07-Feb-89 T s	2-Fluorobiphenyl	0.00000	95.0	100.0	95.00
07-Feb-89 T s	2-Fluorobiphenyl	0.00000	86.0	100.0	86.00
07-Feb-89 T s	2-Fluorobiphenyl	0.00000	84.0	100.0	84.00
08-Feb-89 T s	2-Fluorobiphenyl	0.00000	84.0	100.0	84.00
07-Feb-89 T T s	2-Fluorobiphenyl	0.00000	83.0	100.0	83.00
07-Feb-89 T T s	2-Fluorobiphenyl	0.00000	87.0	100.0	87.00
07-Feb-89 T T s	2-Fluorobiphenyl	0.00000	81.0	100.0	81.00
07-Feb-89 T T s	2-Fluorobiphenyl	0.00000	86.0	100.0	86.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	82.0	100.0	82.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	80.0	100.0	80.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	81.0	100.0	81.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	84.0	100.0	84.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	80.0	100.0	80.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	84.0	100.0	84.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	80.0	100.0	80.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	76.0	100.0	76.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	76.0	100.0	76.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	76.0	100.0	76.00
Number of Samples = 50			Below acceptance = 0		
Mean % Recovery = 84			Above acceptance = 0		
Standard Deviation = 8.03			Acceptance Criteria 43.00 - 116.00		
09-Jan-89 P s	2-Fluorophenol	0.00000	78.0	100.0	78.00
09-Jan-89 P s	2-Fluorophenol	0.00000	58.0	100.0	58.00
09-Jan-89 P s	2-Fluorophenol	0.00000	81.0	100.0	81.00
09-Jan-89 P s	2-Fluorophenol	0.00000	87.0	100.0	87.00
09-Jan-89 P s	2-Fluorophenol	0.00000	57.0	100.0	57.00
09-Jan-89 P s	2-Fluorophenol	0.00000	82.0	100.0	82.00
09-Jan-89 P s	2-Fluorophenol	0.00000	87.0	100.0	87.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, U = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
09-Jan-89 P s	2-Fluorophenol	0.00000	87.0	100.0	87.00
09-Jan-89 P s	2-Fluorophenol	0.00000	62.0	100.0	62.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	85.0	100.0	85.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	94.0	100.0	94.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	88.0	100.0	88.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	82.0	100.0	82.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	88.0	100.0	88.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	80.0	100.0	80.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	97.0	100.0	97.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	90.0	100.0	90.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	84.0	100.0	84.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	84.0	100.0	84.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	87.0	100.0	87.00
23-Jan-89 P T s	2-Fluorophenol	0.00000	16.0	100.0	16.00
09-Jan-89 T s	2-Fluorophenol	0.00000	69.0	100.0	69.00
03-Feb-89 T s	2-Fluorophenol	0.00000	59.0	100.0	59.00
03-Feb-89 T s	2-Fluorophenol	0.00000	90.0	100.0	90.00
03-Feb-89 T s	2-Fluorophenol	0.00000	53.0	100.0	53.00
06-Feb-89 T s	2-Fluorophenol	0.00000	48.0	100.0	48.00
06-Feb-89 T s	2-Fluorophenol	0.00000	40.0	100.0	40.00
06-Feb-89 T s	2-Fluorophenol	0.00000	42.0	100.0	42.00
06-Feb-89 T s	2-Fluorophenol	0.00000	2.40	100.0	2.40
06-Feb-89 T s	2-Fluorophenol	0.00000	52.0	100.0	52.00
06-Feb-89 T s	2-Fluorophenol	0.00000	4.90	100.0	4.90
07-Feb-89 T s	2-Fluorophenol	0.00000	92.0	100.0	92.00
07-Feb-89 T s	2-Fluorophenol	0.00000	44.0	100.0	44.00
07-Feb-89 T s	2-Fluorophenol	0.00000	62.0	100.0	62.00
07-Feb-89 T s	2-Fluorophenol	0.00000	65.0	100.0	65.00
08-Feb-89 T s	2-Fluorophenol	0.00000	32.0	100.0	32.00
07-Feb-89 T T s	2-Fluorophenol	0.00000	123.0	100.0	123.00
07-Feb-89 T T s	2-Fluorophenol	0.00000	62.0	100.0	62.00
07-Feb-89 T T s	2-Fluorophenol	0.00000	140.0	100.0	140.00
07-Feb-89 T T s	2-Fluorophenol	0.00000	128.0	100.0	128.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	146.0	100.0	146.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	1.10	100.0	1.10
08-Feb-89 T T s	2-Fluorophenol	0.00000	160.0	100.0	160.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	11.0	100.0	11.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
08-Feb-89 T T s	2-Fluorophenol	0.00000	10.0	100.0	10.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	11.0	100.0	11.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	8.00	100.0	8.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	140.0	100.0	140.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	122.0	100.0	122.00
08-Feb-89 T T s	2-Fluorophenol	0.00000	153.0	100.0	153.00

Number of Samples = 50
Mean % Recovery = 72
Standard Deviation = 40.69

Below acceptance = 8
Above acceptance = 8
Acceptance Criteria 21.00 - 100.00

09-Jan-89 P	s	Nitrobenzene-d5	0.00000	64.0	100.0	64.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	82.0	100.0	82.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	12.0	100.0	12.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	29.0	100.0	29.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	14.0	100.0	14.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	87.0	100.0	87.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	6.10	100.0	6.10
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	78.0	100.0	78.00
09-Jan-89 P	s	Nitrobenzene-d5	0.00000	52.0	100.0	52.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	94.0	100.0	94.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	90.0	100.0	90.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	82.0	100.0	82.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	86.0	100.0	86.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	79.0	100.0	79.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	93.0	100.0	93.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	81.0	100.0	81.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	95.0	100.0	95.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	102.0	100.0	102.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	96.0	100.0	96.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	87.0	100.0	87.00
23-Jan-89 P T s		Nitrobenzene-d5	0.00000	81.0	100.0	81.00
03-Feb-89 T	s	Nitrobenzene-d5	0.00000	80.0	100.0	80.00
03-Feb-89 T	s	Nitrobenzene-d5	0.00000	97.0	100.0	97.00
03-Feb-89 T	s	Nitrobenzene-d5	0.00000	88.0	100.0	88.00
06-Feb-89 T	s	Nitrobenzene-d5	0.00000	86.0	100.0	86.00
06-Feb-89 T	s	Nitrobenzene-d5	0.00000	89.0	100.0	89.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
06-Feb-89 T s	Nitrobenzene-d5	0.00000	82.0	100.0	82.00
06-Feb-89 T s	Nitrobenzene-d5	0.00000	87.0	100.0	87.00
06-Feb-89 T s	Nitrobenzene-d5	0.00000	81.0	100.0	81.00
06-Feb-89 T s	Nitrobenzene-d5	0.00000	80.0	100.0	80.00
07-Feb-89 T s	Nitrobenzene-d5	0.00000	74.0	100.0	74.00
07-Feb-89 T s	Nitrobenzene-d5	0.00000	85.0	100.0	85.00
07-Feb-89 T s	Nitrobenzene-d5	0.00000	77.0	100.0	77.00
07-Feb-89 T s	Nitrobenzene-d5	0.00000	73.0	100.0	73.00
08-Feb-89 T s	Nitrobenzene-d5	0.00000	94.0	100.0	94.00
07-Feb-89 T T s	Nitrobenzene-d5	0.00000	65.0	100.0	65.00
07-Feb-89 T T s	Nitrobenzene-d5	0.00000	89.0	100.0	89.00
07-Feb-89 T T s	Nitrobenzene-d5	0.00000	88.0	100.0	88.00
07-Feb-89 T T s	Nitrobenzene-d5	0.00000	79.0	100.0	79.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	83.0	100.0	83.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	85.0	100.0	85.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	86.0	100.0	86.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	72.0	100.0	72.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	101.0	100.0	101.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	84.0	100.0	84.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	87.0	100.0	87.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	88.0	100.0	88.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	90.0	100.0	90.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	82.0	100.0	82.00

Number of Samples = 49
Mean % Recovery = 78
Standard Deviation = 21.19

Below acceptance = 4
Above acceptance = 0
Acceptance Criteria 35.00 - 114.00

09-Jan-89 P s	Phenol-d5	0.00000	113.0	100.0	113.00
09-Jan-89 P s	Phenol-d5	0.00000	98.0	100.0	98.00
09-Jan-89 P s	Phenol-d5	0.00000	92.0	100.0	92.00
09-Jan-89 P s	Phenol-d5	0.00000	105.0	100.0	105.00
09-Jan-89 P s	Phenol-d5	0.00000	99.0	100.0	99.00
09-Jan-89 P s	Phenol-d5	0.00000	113.0	100.0	113.00
09-Jan-89 P s	Phenol-d5	0.00000	110.0	100.0	110.00
09-Jan-89 P s	Phenol-d5	0.00000	95.0	100.0	95.00
09-Jan-89 P s	Phenol-d5	0.00000	106.0	100.0	106.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
23-Jan-89 P T s	Phenol-d5	0.00000	91.0	100.0	91.00
23-Jan-89 P T s	Phenol-d5	0.00000	88.0	100.0	88.00
23-Jan-89 P T s	Phenol-d5	0.00000	79.0	100.0	79.00
23-Jan-89 P T s	Phenol-d5	0.00000	95.0	100.0	95.00
23-Jan-89 P T s	Phenol-d5	0.00000	88.0	100.0	88.00
23-Jan-89 P T s	Phenol-d5	0.00000	61.0	100.0	61.00
23-Jan-89 P T s	Phenol-d5	0.00000	89.0	100.0	89.00
23-Jan-89 P T s	Phenol-d5	0.00000	87.0	100.0	87.00
23-Jan-89 P T s	Phenol-d5	0.00000	91.0	100.0	91.00
23-Jan-89 P T s	Phenol-d5	0.00000	85.0	100.0	85.00
23-Jan-89 P T s	Phenol-d5	0.00000	101.0	100.0	101.00
23-Jan-89 P T s	Phenol-d5	0.00000	93.0	100.0	93.00
09-Jan-89 T s	Phenol-d5	0.00000	113.0	100.0	113.00
03-Feb-89 T s	Phenol-d5	0.00000	59.0	100.0	59.00
03-Feb-89 T s	Phenol-d5	0.00000	58.0	100.0	58.00
03-Feb-89 T s	Phenol-d5	0.00000	93.0	100.0	93.00
06-Feb-89 T s	Phenol-d5	0.00000	21.0	100.0	21.00
06-Feb-89 T s	Phenol-d5	0.00000	56.0	100.0	56.00
06-Feb-89 T s	Phenol-d5	0.00000	49.0	100.0	49.00
06-Feb-89 T s	Phenol-d5	0.00000	21.0	100.0	21.00
06-Feb-89 T s	Phenol-d5	0.00000	65.0	100.0	65.00
06-Feb-89 T s	Phenol-d5	0.00000	63.0	100.0	63.00
07-Feb-89 T s	Phenol-d5	0.00000	42.0	100.0	42.00
07-Feb-89 T s	Phenol-d5	0.00000	27.0	100.0	27.00
07-Feb-89 T s	Phenol-d5	0.00000	41.0	100.0	41.00
07-Feb-89 T s	Phenol-d5	0.00000	76.0	100.0	76.00
08-Feb-89 T s	Phenol-d5	0.00000	43.0	100.0	43.00
07-Feb-89 T T s	Phenol-d5	0.00000	82.0	100.0	82.00
07-Feb-89 T T s	Phenol-d5	0.00000	84.0	100.0	84.00
07-Feb-89 T T s	Phenol-d5	0.00000	70.0	100.0	70.00
07-Feb-89 T T s	Phenol-d5	0.00000	74.0	100.0	74.00
08-Feb-89 T T s	Phenol-d5	0.00000	39.0	100.0	39.00
08-Feb-89 T T s	Phenol-d5	0.00000	89.0	100.0	89.00
08-Feb-89 T T s	Phenol-d5	0.00000	73.0	100.0	73.00
08-Feb-89 T T s	Phenol-d5	0.00000	83.0	100.0	83.00
08-Feb-89 T T s	Phenol-d5	0.00000	88.0	100.0	88.00
08-Feb-89 T T s	Phenol-d5	0.00000	26.0	100.0	26.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, U = UILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
08-Feb-89 T T s	Phenol-d5	0.00000	79.0	100.0	79.00
08-Feb-89 T T s	Phenol-d5	0.00000	6.80	100.0	6.80
08-Feb-89 T T s	Phenol-d5	0.00000	30.0	100.0	30.00
08-Feb-89 T T s	Phenol-d5	0.00000	26.0	100.0	26.00
Number of Samples = 50			Below acceptance = 1		
Mean % Recovery = 73			Above acceptance = 11		
Standard Deviation = 28.16			Acceptance Criteria 10.00 - 94.00		
09-Jan-89 P s	Terphenyl-d14	0.00000	69.0	100.0	69.00
09-Jan-89 P s	Terphenyl-d14	0.00000	66.0	100.0	66.00
09-Jan-89 P s	Terphenyl-d14	0.00000	87.0	100.0	87.00
09-Jan-89 P s	Terphenyl-d14	0.00000	75.0	100.0	75.00
09-Jan-89 P s	Terphenyl-d14	0.00000	60.0	100.0	60.00
09-Jan-89 P s	Terphenyl-d14	0.00000	90.0	100.0	90.00
09-Jan-89 P s	Terphenyl-d14	0.00000	79.0	100.0	79.00
09-Jan-89 P s	Terphenyl-d14	0.00000	83.0	100.0	83.00
09-Jan-89 P s	Terphenyl-d14	0.00000	81.0	100.0	81.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	150.0	100.0	150.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	67.0	100.0	67.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	76.0	100.0	76.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	93.0	100.0	93.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	172.0	100.0	172.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	127.0	100.0	127.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	152.0	100.0	152.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	138.0	100.0	138.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	118.0	100.0	118.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	147.0	100.0	147.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	130.0	100.0	130.00
23-Jan-89 P T s	Terphenyl-d14	0.00000	74.0	100.0	74.00
09-Jan-89 T s	Terphenyl-d14	0.00000	70.0	100.0	70.00
03-Feb-89 T s	Terphenyl-d14	0.00000	86.0	100.0	86.00
03-Feb-89 T s	Terphenyl-d14	0.00000	90.0	100.0	90.00
03-Feb-89 T s	Terphenyl-d14	0.00000	87.0	100.0	87.00
06-Feb-89 T s	Terphenyl-d14	0.00000	82.0	100.0	82.00
06-Feb-89 T s	Terphenyl-d14	0.00000	87.0	100.0	87.00
06-Feb-89 T s	Terphenyl-d14	0.00000	94.0	100.0	94.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type Parameter	Detection Flag	Measured Value
Metals, ICPES		
25-May-89 T T p Barium, ICPES	ND	0.010
26-May-89 T T p Barium, ICPES	ND	0.010
Total Number of Blanks = 31	Concentration Range NC	
Total Number above Detection Limit = 0	Maximum Detection Limit = 0.010	
09-Jan-89 P p Beryllium, ICPES	ND	0.0020
17-Apr-89 P p Beryllium, ICPES	ND	0.0020
18-Jan-89 P B B Beryllium, ICPES	ND	0.0020
18-Jan-89 P B p Beryllium, ICPES	ND	0.0020
23-Jan-89 P B p Beryllium, ICPES	ND	0.0020
25-Jan-89 P B p Beryllium, ICPES	ND	0.0020
04-Apr-89 P B p Beryllium, ICPES	ND	0.0020
18-Jan-89 P E E Beryllium, ICPES	ND	0.0020
18-Jan-89 P E p Beryllium, ICPES	ND	0.0020
23-Jan-89 P T T Beryllium, ICPES	ND	0.0020
23-Jan-89 P T p Beryllium, ICPES	ND	0.0020
27-Jan-89 T p Beryllium, ICPES	ND	0.0020
06-Feb-89 T A p Beryllium, ICPES	ND	0.0010
08-Feb-89 T A p Beryllium, ICPES	ND	0.0020
04-Mar-89 T A p Beryllium, ICPES	ND	0.0020
04-Mar-89 T A p Beryllium, ICPES	ND	0.0020
04-Mar-89 T A p Beryllium, ICPES	ND	0.0020
08-Mar-89 T A p Beryllium, ICPES	ND	0.0020
12-Apr-89 T A p Beryllium, ICPES	ND	0.0020
10-Feb-89 T B p Beryllium, ICPES	ND	0.0020
23-Feb-89 T B p Beryllium, ICPES	ND	0.0020
27-Feb-89 T B p Beryllium, ICPES	ND	0.0020
21-Feb-89 T E E Beryllium, ICPES	ND	0.0020
21-Feb-89 T E p Beryllium, ICPES	ND	0.0020
04-Apr-89 T E p Beryllium, ICPES	ND	0.0020
08-Feb-89 T T T Beryllium, ICPES	ND	0.0020
07-Feb-89 T T p Beryllium, ICPES	ND	0.0020
08-Feb-89 T T p Beryllium, ICPES	ND	0.0020
25-May-89 T T p Beryllium, ICPES	ND	0.0020

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
26-May-89 T T p	Beryllium, ICPES	ND	0.0020
Total Number of Blanks = 30		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 0.0020	
09-Jan-89 P p	Cadmium, ICPES	ND	0.0050
18-Jan-89 P B B	Cadmium, ICPES	ND	0.0050
18-Jan-89 P B p	Cadmium, ICPES	ND	0.0050
23-Jan-89 P B p	Cadmium, ICPES	ND	0.0050
25-Jan-89 P B p	Cadmium, ICPES	ND	0.0050
04-Apr-89 P B p	Cadmium, ICPES	ND	0.0050
18-Jan-89 P E E	Cadmium, ICPES	ND	0.0050
18-Jan-89 P E p	Cadmium, ICPES	ND	0.0050
15-Mar-89 P E p	Cadmium, ICPES	ND	0.0050
23-Jan-89 P T T	Cadmium, ICPES	ND	0.0050
23-Jan-89 P T p	Cadmium, ICPES	ND	0.0050
27-Jan-89 T p	Cadmium, ICPES	ND	0.0050
06-Feb-89 T A r	Cadmium, ICPES	ND	0.0050
08-Feb-89 T A p	Cadmium, ICPES	ND	0.0050
04-Mar-89 T A p	Cadmium, ICPES	ND	0.0050
04-Mar-89 T A p	Cadmium, ICPES	ND	0.0050
04-Mar-89 T A p	Cadmium, ICPES	ND	0.0050
08-Mar-89 T A p	Cadmium, ICPES	ND	0.0050
12-Apr-89 T A p	Cadmium, ICPES	ND	0.0050
10-Feb-89 T B p	Cadmium, ICPES	ND	0.0050
23-Feb-89 T B p	Cadmium, ICPES	ND	0.0050
27-Feb-89 T B p	Cadmium, ICPES	ND	0.0050
21-Feb-89 T E E	Cadmium, ICPES	ND	0.0050
21-Feb-89 T E p	Cadmium, ICPES	ND	0.0050
04-Apr-89 T E p	Cadmium, ICPES	ND	0.0050
08-Feb-89 T T T	Cadmium, ICPES	ND	0.0050
07-Feb-89 T T p	Cadmium, ICPES	ND	0.0050
08-Feb-89 T T p	Cadmium, ICPES	ND	0.0050
15-Mar-89 T T p	Cadmium, ICPES	ND	0.0050
25-May-89 T T p	Cadmium, ICPES	ND	0.0050

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
26-May-89 T T p	Cadmium, ICPES	ND	0.0050
Total Number of Blanks = 31		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 0.0050	
09-Jan-89 P p	Calcium, ICPES	ND	1.0
26-Jan-89 P p	Calcium, ICPES	ND	1.0
18-Jan-89 P B B	Calcium, ICPES	ND	1.0
18-Jan-89 P B p	Calcium, ICPES	<5X	1.3
23-Jan-89 P B p	Calcium, ICPES	<5X	2.0
25-Jan-89 P B p	Calcium, ICPES	<5X	1.4
04-Apr-89 P B p	Calcium, ICPES	<5X	1.9
18-Jan-89 P E E	Calcium, ICPES	ND	1.0
18-Jan-89 P E p	Calcium, ICPES	<5X	1.3
23-Jan-89 P T T	Calcium, ICPES	ND	1.0
23-Jan-89 P T p	Calcium, ICPES	<5X	2.0
27-Jan-89 T p	Calcium, ICPES	ND	1.0
06-Feb-89 T A p	Calcium, ICPES	<5X	1.1
08-Feb-89 T A p	Calcium, ICPES	<5X	1.5
09-Feb-89 T A p	Calcium, ICPES	<5X	1.8
04-Mar-89 T A p	Calcium, ICPES	<5X	1.2
04-Mar-89 T A p	Calcium, ICPES	<5X	1.9
04-Mar-89 T A p	Calcium, ICPES	<5X	1.5
08-Mar-89 T A p	Calcium, ICPES	<5X	2.2
12-Apr-89 T A p	Calcium, ICPES	<5X	2.4
10-Feb-89 T B p	Calcium, ICPES	<5X	1.6
24-Feb-89 T B p	Calcium, ICPES	ND	1.0
27-Feb-89 T B p	Calcium, ICPES	<5X	1.1
03-Mar-89 T B p	Calcium, ICPES	<5X	1.1
06-Mar-89 T B p	Calcium, ICPES	<5X	1.1
06-Mar-89 T B p	Calcium, ICPES	<5X	1.6
21-Feb-89 T E E	Calcium, ICPES	<5X	1.0
21-Feb-89 T E p	Calcium, ICPES	<5X	1.7
21-Feb-89 T E p	Calcium, ICPES	<5X	1.7
04-Apr-89 T E p	Calcium, ICPES	<5X	1.1

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
08-Feb-89 T T T	Calcium, ICPES	<5X	2.0
07-Feb-89 T T p	Calcium, ICPES	<5X	1.5
07-Feb-89 T T p	Calcium, ICPES	<5X	1.5
08-Feb-89 T T p	Calcium, ICPES	<5X	1.5
25-May-89 T T p	Calcium, ICPES	<5X	1.2
26-May-89 T T p	Calcium, ICPES	<5X	1.1

Total Number of Blanks = 36
Total Number above Detection Limit = 29

Concentration Range 1.0 - 2.4
Maximum Detection Limit = 1.0

09-Jan-89 P p	Chromium, ICPES	ND	0.030
18-Jan-89 P B B	Chromium, ICPES	ND	0.030
18-Jan-89 P B p	Chromium, ICPES	ND	0.030
25-Jan-89 P B p	Chromium, ICPES	ND	0.030
04-Apr-89 P B p	Chromium, ICPES	ND	0.030
18-Jan-89 P E E	Chromium, ICPES	ND	0.030
18-Feb-89 P E p	Chromium, ICPES	ND	0.030
15-Mar-89 P E p	Chromium, ICPES	ND	0.030
18-Jan-89 P T T	Chromium, ICPES	ND	0.030
27-Jan-89 T p	Chromium, ICPES	ND	0.030
06-Feb-89 T A p	Chromium, ICPES	ND	0.030
08-Feb-89 T A p	Chromium, ICPES	ND	0.030
04-Mar-89 T A p	Chromium, ICPES	ND	0.030
04-Mar-89 T A p	Chromium, ICPES	ND	0.030
12-Apr-89 T A p	Chromium, ICPES	ND	0.030
10-Feb-89 T B p	Chromium, ICPES	ND	0.030
23-Feb-89 T B p	Chromium, ICPES	ND	0.030
27-Feb-89 T B p	Chromium, ICPES	ND	0.030
04-Mar-89 T B p	Chromium, ICPES	ND	0.030
04-Mar-89 T B p	Chromium, ICPES	ND	0.030
21-Feb-89 T E E	Chromium, ICPES	ND	0.030
21-Feb-89 T E p	Chromium, ICPES	ND	0.030
04-Apr-89 T E p	Chromium, ICPES	ND	0.030
23-Jan-89 T T T	Chromium, ICPES	ND	0.030
08-Feb-89 T T T	Chromium, ICPES	ND	0.030

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
23-Jan-89 T T p	Chromium, ICPES	ND	0.030
08-Feb-89 T T p	Chromium, ICPES	ND	0.030
15-Mar-89 T T p	Chromium, ICPES	ND	0.030
25-May-89 T T p	Chromium, ICPES	ND	0.030
26-May-89 T T p	Chromium, ICPES	ND	0.030

Total Number of Blanks = 30 Concentration Range NC
Total Number above Detection Limit = 0 Maximum Detection Limit = 0.030

09-Jan-89 P p	Copper, ICPES	ND	0.020
18-Jan-89 P B B	Copper, ICPES	ND	0.020
18-Jan-89 P B p	Copper, ICPES	ND	0.020
23-Jan-89 P B p	Copper, ICPES	ND	0.020
25-Jan-89 P B p	Copper, ICPES	ND	0.020
04-Apr-89 P B p	Copper, ICPES	ND	0.020
18-Jan-89 P E E	Copper, ICPES	ND	0.020
18-Jan-89 P E p	Copper, ICPES	ND	0.020
15-Mar-89 P E p	Copper, ICPES	ND	0.020
23-Jan-89 P T T	Copper, ICPES	ND	0.020
23-Jan-89 P T p	Copper, ICPES	ND	0.020
27-Jan-89 T p	Copper, ICPES	ND	0.020
06-Feb-89 T A p	Copper, ICPES	ND	0.020
08-Feb-89 T A p	Copper, ICPES	ND	0.020
04-Mar-89 T A p	Copper, ICPES	ND	0.020
04-Mar-89 T A p	Copper, ICPES	ND	0.020
04-Mar-89 T A p	Copper, ICPES	ND	0.020
08-Mar-89 T A p	Copper, ICPES	ND	0.020
12-Apr-89 T A p	Copper, ICPES	ND	0.020
10-Feb-89 T B p	Copper, ICPES	ND	0.020
23-Feb-89 T B p	Copper, ICPES	ND	0.020
27-Feb-89 T B p	Copper, ICPES	ND	0.020
21-Feb-89 T E E	Copper, ICPES	<5X	0.030
21-Feb-89 T E p	Copper, ICPES	<5X	0.060
04-Apr-89 T E p	Copper, ICPES	<5X	0.090
08-Feb-89 T T T	Copper, ICPES	ND	0.020

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
09-Jan-89 P p	Antimony, ICPES	ND	0.20
26-Jan-89 P p	Antimony, ICPES	ND	0.20
18-Jan-89 P B B	Antimony, ICPES	ND	0.20
18-Jan-89 P B p	Antimony, ICPES	ND	0.20
23-Jan-89 P B p	Antimony, ICPES	ND	0.20
25-Jan-89 P B p	Antimony, ICPES	ND	0.20
04-Apr-89 P B p	Antimony, ICPES	ND	0.20
18-Jan-89 P E E	Antimony, ICPES	ND	0.20
18-Jan-89 P E p	Antimony, ICPES	ND	0.20
23-Jan-89 P T T	Antimony, ICPES	ND	0.20
23-Jan-89 P T p	Antimony, ICPES	ND	0.20
27-Jan-89 T p	Antimony, ICPES	ND	0.20
06-Feb-89 T A p	Antimony, ICPES	ND	0.20
08-Feb-89 T A p	Antimony, ICPES	ND	0.20
04-Mar-89 T A p	Antimony, ICPES	ND	0.20
04-Mar-89 T A p	Antimony, ICPES	ND	0.20
04-Mar-89 T A p	Antimony, ICPES	ND	0.20
08-Mar-89 T A p	Antimony, ICPES	ND	0.20
12-Apr-89 T A p	Antimony, ICPES	ND	0.20
10-Feb-89 T B p	Antimony, ICPES	ND	0.20
23-Feb-89 T B p	Antimony, ICPES	ND	0.20
27-Feb-89 T B p	Antimony, ICPES	ND	0.20
21-Feb-89 T E E	Antimony, ICPES	ND	0.20
21-Feb-89 T E p	Antimony, ICPES	ND	0.20
04-Apr-89 T E p	Antimony, ICPES	ND	0.20
08-Feb-89 T T T	Antimony, ICPES	ND	0.20
07-Feb-89 T T p	Antimony, ICPES	ND	0.20
08-Feb-89 T T p	Antimony, ICPES	ND	0.20
25-May-89 T T p	Antimony, ICPES	ND	0.20
26-May-89 T T p	Antimony, ICPES	ND	0.020

Total Number of Blanks = 30 Concentration Range NC

Total Number above Detection Limit = 0 Maximum Detection Limit = 0.20

Matrix: P = Pretreatment, T = Treated

Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution

E = EP Leaching Solution, B = BET Leaching Solution

A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,

r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
09-Jan-89 P	p Arsenic, ICPES	ND	0.30
27-Jan-89 T	p Arsenic, ICPES	ND	0.30
Total Number of Blanks = 2		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 0.30	
09-Jan-89 P	p Barium, ICPES	ND	0.010
26-Jan-89 P	p Barium, ICPES	ND	0.010
17-Apr-89 P	p Barium, ICPES	ND	0.010
18-Jan-89 P B B	Barium, ICPES	ND	0.010
18-Jan-89 P B	p Barium, ICPES	ND	0.010
23-Jan-89 P B	p Barium, ICPES	ND	0.010
25-Jan-89 P B	p Barium, ICPES	ND	0.010
04-Apr-89 P B	p Barium, ICPES	ND	0.010
18-Jan-89 P E E	Barium, ICPES	ND	0.010
18-Jan-89 P E	p Barium, ICPES	ND	0.010
23-Jan-89 P T T	Barium, ICPES	ND	0.010
23-Jan-89 P T	p Barium, ICPES	ND	0.010
27-Jan-89 T	p Barium, ICPES	ND	0.010
06-Feb-89 T A	p Barium, ICPES	ND	0.010
08-Feb-89 T A	p Barium, ICPES	ND	0.010
04-Mar-89 T A	p Barium, ICPES	ND	0.010
04-Mar-89 T A	p Barium, ICPES	ND	0.010
04-Mar-89 T A	p Barium, ICPES	ND	0.010
08-Mar-89 T A	p Barium, ICPES	ND	0.010
12-Apr-89 T A	p Barium, ICPES	ND	0.010
10-Feb-89 T B	p Barium, ICPES	ND	0.010
23-Feb-89 T B	p Barium, ICPES	ND	0.010
27-Feb-89 T B	p Barium, ICPES	ND	0.010
21-Feb-89 T E E	Barium, ICPES	ND	0.010
21-Feb-89 T E	p Barium, ICPES	ND	0.010
04-Apr-89 T E	p Barium, ICPES	ND	0.010
08-Feb-89 T T T	Barium, ICPES	ND	0.010
07-Feb-89 T T	p Barium, ICPES	ND	0.010
08-Feb-89 T T	p Barium, ICPES	ND	0.010

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics					
06-Feb-89 T s	Terphenyl-d14	0.00000	96.0	100.0	96.00
06-Feb-89 T s	Terphenyl-d14	0.00000	84.0	100.0	84.00
06-Feb-89 T s	Terphenyl-d14	0.00000	82.0	100.0	82.00
07-Feb-89 T s	Terphenyl-d14	0.00000	84.0	100.0	84.00
07-Feb-89 T s	Terphenyl-d14	0.00000	115.0	100.0	115.00
07-Feb-89 T s	Terphenyl-d14	0.00000	72.0	100.0	72.00
07-Feb-89 T s	Terphenyl-d14	0.00000	78.0	100.0	78.00
08-Feb-89 T s	Terphenyl-d14	0.00000	91.0	100.0	91.00
07-Feb-89 T T s	Terphenyl-d14	0.00000	96.0	100.0	96.00
07-Feb-89 T T s	Terphenyl-d14	0.00000	78.0	100.0	78.00
07-Feb-89 T T s	Terphenyl-d14	0.00000	100.0	100.0	100.00
07-Feb-89 T T s	Terphenyl-d14	0.00000	96.0	100.0	96.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	97.0	100.0	97.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	71.0	100.0	71.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	81.0	100.0	81.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	82.0	100.0	82.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	61.0	100.0	61.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	71.0	100.0	71.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	99.0	100.0	99.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	85.0	100.0	85.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	77.0	100.0	77.00
08-Feb-89 T T s	Terphenyl-d14	0.00000	91.0	100.0	91.00

Number of Samples = 50 Below acceptance = 0
Mean % Recovery = 92 Above acceptance = 4
Standard Deviation = 23.03 Acceptance Criteria 33.00 - 141.00

Semivolatile Organics, Matrix Spike					
09-Jan-89 P m	1,2,4-Trichlorobenzene	0.00000	95.0	100.0	95.00
09-Jan-89 P m	1,2,4-Trichlorobenzene	0.00000	88.0	100.0	88.00
23-Jan-89 P m	1,2,4-Trichlorobenzene	0.00000	85.0	100.0	85.00
06-Feb-89 T m	1,2,4-Trichlorobenzene	0.00000	110.0	100.0	110.00
06-Feb-89 T m	1,2,4-Trichlorobenzene	0.00000	93.0	100.0	93.00
07-Feb-89 T T m	1,2,4-Trichlorobenzene	0.00000	108.0	100.0	108.00
07-Feb-89 T T m	1,2,4-Trichlorobenzene	0.00000	102.0	100.0	102.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
08-Feb-89 T T m	1,2,4-Trichlorobenzene	0.00000	108.0	100.0	108.00
08-Feb-89 T T m	1,2,4-Trichlorobenzene	0.00000	106.0	100.0	106.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 99			Above acceptance = 0		
Standard Deviation = 9.40			Acceptance Criteria 44.00 - 142.00		
09-Jan-89 P m	1,4-Dichlorobenzene	0.00000	85.0	100.0	85.00
09-Jan-89 P m	1,4-Dichlorobenzene	0.00000	84.0	100.0	84.00
23-Jan-89 P m	1,4-Dichlorobenzene	0.00000	77.0	100.0	77.00
06-Feb-89 T m	1,4-Dichlorobenzene	0.00000	88.0	100.0	88.00
06-Feb-89 T m	1,4-Dichlorobenzene	0.00000	73.0	100.0	73.00
07-Feb-89 T T m	1,4-Dichlorobenzene	0.00000	97.0	100.0	97.00
07-Feb-89 T T m	1,4-Dichlorobenzene	0.00000	87.0	100.0	87.00
08-Feb-89 T T m	1,4-Dichlorobenzene	0.00000	76.0	100.0	76.00
08-Feb-89 T T m	1,4-Dichlorobenzene	0.00000	74.0	100.0	74.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 82			Above acceptance = 0		
Standard Deviation = 7.93			Acceptance Criteria 20.00 - 124.00		
09-Jan-89 P s	2,4,6-Tribromophenol	0.00000	112.0	100.0	112.00
09-Jan-89 P s	2,4,6-Tribromophenol	0.00000	108.0	100.0	108.00
23-Jan-89 P s	2,4,6-Tribromophenol	0.00000	84.0	100.0	84.00
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000		100.0	NR
06-Feb-89 T s	2,4,6-Tribromophenol	0.00000		100.0	NR
07-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	110.0	100.0	110.00
07-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	113.0	100.0	113.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	12.0	100.0	12.00
08-Feb-89 T T s	2,4,6-Tribromophenol	0.00000	9.00	100.0	9.00
Number of Samples = 9			Below acceptance = 3		
Mean % Recovery = 60			Above acceptance = 0		
Standard Deviation = 53.60			Acceptance Criteria 10.00 - 123.00		
09-Jan-89 P m	2,4-Dinitrotoluene	0.00000	89.0	100.0	89.00
09-Jan-89 P m	2,4-Dinitrotoluene	0.00000	33.0	100.0	33.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
23-Jan-89 P m	2,4-Dinitrotoluene	0.00000	81.0	100.0	81.00
06-Feb-89 T m	2,4-Dinitrotoluene	0.00000	68.0	100.0	68.00
06-Feb-89 T m	2,4-Dinitrotoluene	0.00000	87.0	100.0	87.00
07-Feb-89 T T m	2,4-Dinitrotoluene	0.00000	99.0	100.0	99.00
07-Feb-89 T T m	2,4-Dinitrotoluene	0.00000	105.0	100.0	105.00
08-Feb-89 T T m	2,4-Dinitrotoluene	0.00000	87.0	100.0	87.00
08-Feb-89 T T m	2,4-Dinitrotoluene	0.00000	87.0	100.0	87.00
Number of Samples = 9			Below acceptance = 1		
Mean % Recovery = 81			Above acceptance = 0		
Standard Deviation = 21.03			Acceptance Criteria 39.00 - 139.00		
09-Jan-89 P m	2-Chlorophenol	0.00000	87.0	100.0	87.00
09-Jan-89 P m	2-Chlorophenol	0.00000	92.0	100.0	92.00
23-Jan-89 P m	2-Chlorophenol	0.00000	75.0	100.0	75.00
06-Feb-89 T m	2-Chlorophenol	0.00000	1.00	100.0	1.00
06-Feb-89 T m	2-Chlorophenol	0.00000		100.0	NR
07-Feb-89 T T m	2-Chlorophenol	0.00000	104.0	100.0	104.00
07-Feb-89 T T m	2-Chlorophenol	0.00000	102.0	100.0	102.00
08-Feb-89 T T m	2-Chlorophenol	0.00000	24.0	100.0	24.00
08-Feb-89 T T m	2-Chlorophenol	0.00000	23.0	100.0	23.00
Number of Samples = 9			Below acceptance = 2		
Mean % Recovery = 56			Above acceptance = 0		
Standard Deviation = 43.74			Acceptance Criteria 23.00 - 134.00		
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	103.0	100.0	103.00
09-Jan-89 P s	2-Fluorobiphenyl	0.00000	99.0	100.0	99.00
23-Jan-89 P s	2-Fluorobiphenyl	0.00000	85.0	100.0	85.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	89.0	100.0	89.00
06-Feb-89 T s	2-Fluorobiphenyl	0.00000	79.0	100.0	79.00
07-Feb-89 T T s	2-Fluorobiphenyl	0.00000	79.0	100.0	79.00
07-Feb-89 T T s	2-Fluorobiphenyl	0.00000	85.0	100.0	85.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	84.0	100.0	84.00
08-Feb-89 T T s	2-Fluorobiphenyl	0.00000	81.0	100.0	81.00
Number of Samples = 9			Below acceptance = 0		

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
Mean % Recovery = 87			Above acceptance = 0		
Standard Deviation = 8.55			Acceptance Criteria 43.00 - 116.00		
09-Jan-89 P	s 2-Fluorophenol	0.00000	91.0	100.0	91.00
09-Jan-89 P	s 2-Fluorophenol	0.00000	87.0	100.0	87.00
23-Jan-89 P	s 2-Fluorophenol	0.00000	92.0	100.0	92.00
06-Feb-89 T	s 2-Fluorophenol	0.00000		100.0	NR
06-Feb-89 T	s 2-Fluorophenol	0.00000		100.0	NR
07-Feb-89 T T	s 2-Fluorophenol	0.00000	161.0	100.0	161.00
07-Feb-89 T T	s 2-Fluorophenol	0.00000	154.0	100.0	154.00
08-Feb-89 T T	s 2-Fluorophenol	0.00000	7.00	100.0	7.00
08-Feb-89 T T	s 2-Fluorophenol	0.00000	10.0	100.0	10.00
Number of Samples = 9			Below acceptance = 4		
Mean % Recovery = 66			Above acceptance = 2		
Standard Deviation = 65.03			Acceptance Criteria 21.00 - 100.00		
09-Jan-89 P	m Acenaphthene	0.00000	84.0	100.0	84.00
09-Jan-89 P	m Acenaphthene	0.00000	80.0	100.0	80.00
23-Jan-89 P	m Acenaphthene	0.00000	83.0	100.0	83.00
06-Feb-89 T	m Acenaphthene	0.00000	83.0	100.0	83.00
06-Feb-89 T	m Acenaphthene	0.00000	69.0	100.0	69.00
07-Feb-89 T T	m Acenaphthene	0.00000	78.0	100.0	78.00
07-Feb-89 T T	m Acenaphthene	0.00000	76.0	100.0	76.00
08-Feb-89 T T	m Acenaphthene	0.00000	73.0	100.0	73.00
08-Feb-89 T T	m Acenaphthene	0.00000	73.0	100.0	73.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 77			Above acceptance = 0		
Standard Deviation = 5.29			Acceptance Criteria 47.00 - 145.00		
09-Jan-89 P	m Di-n-propylnitrosamine	0.00000	36.0	100.0	36.00
09-Jan-89 P	m Di-n-propylnitrosamine	0.00000	39.0	100.0	39.00
23-Jan-89 P	m Di-n-propylnitrosamine	0.00000	83.0	100.0	83.00
06-Feb-89 T	m Di-n-propylnitrosamine	0.00000	98.0	100.0	98.00
06-Feb-89 T	m Di-n-propylnitrosamine	0.00000	76.0	100.0	76.00
07-Feb-89 T T	m Di-n-propylnitrosamine	0.00000	87.0	100.0	87.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
07-Feb-89 T T m	Di-n-propylnitrosamine	0.00000	76.0	100.0	76.00
08-Feb-89 T T m	Di-n-propylnitrosamine	0.00000	107.0	100.0	107.00
08-Feb-89 T T m	Di-n-propylnitrosamine	0.00000	103.0	100.0	103.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 78			Above acceptance = 0		
Standard Deviation = 25.65			Acceptance Criteria .00 - 230.00		
09-Jan-89 P s	Nitrobenzene-d5	0.00000	39.0	100.0	39.00
09-Jan-89 P s	Nitrobenzene-d5	0.00000	99.0	100.0	99.00
23-Jan-89 P s	Nitrobenzene-d5	0.00000	89.0	100.0	89.00
06-Feb-89 T s	Nitrobenzene-d5	0.00000	77.0	100.0	77.00
06-Feb-89 T s	Nitrobenzene-d5	0.00000	93.0	100.0	93.00
07-Feb-89 T T s	Nitrobenzene-d5	0.00000	94.0	100.0	94.00
07-Feb-89 T T s	Nitrobenzene-d5	0.00000	89.0	100.0	89.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	108.0	100.0	108.00
08-Feb-89 T T s	Nitrobenzene-d5	0.00000	106.0	100.0	106.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 88			Above acceptance = 0		
Standard Deviation = 20.70			Acceptance Criteria 35.00 - 114.00		
09-Jan-89 P m	Nitrophenol	0.00000	59.0	100.0	59.00
09-Jan-89 P m	Nitrophenol	0.00000	69.0	100.0	69.00
23-Jan-89 P m	Nitrophenol	0.00000	51.0	100.0	51.00
06-Feb-89 T m	Nitrophenol	0.00000		100.0	NR
06-Feb-89 T m	Nitrophenol	0.00000	1.00	100.0	1.00
07-Feb-89 T T m	Nitrophenol	0.00000	71.0	100.0	71.00
07-Feb-89 T T m	Nitrophenol	0.00000	87.0	100.0	87.00
08-Feb-89 T T m	Nitrophenol	0.00000	3.00	100.0	3.00
08-Feb-89 T T m	Nitrophenol	0.00000	2.60	100.0	2.60
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 38			Above acceptance = 0		
Standard Deviation = 35.97			Acceptance Criteria .00 - 132.00		
09-Jan-89 P m	Pentachlorophenol	0.00000	134.0	100.0	134.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
09-Jan-89 P m	Pentachlorophenol	0.00000	128.0	100.0	128.00
23-Jan-89 P m	Pentachlorophenol	0.00000	66.0	100.0	66.00
06-Feb-89 T m	Pentachlorophenol	0.00000		100.0	NR
06-Feb-89 T m	Pentachlorophenol	0.00000		100.0	NR
07-Feb-89 T T m	Pentachlorophenol	0.00000	99.0	100.0	99.00
07-Feb-89 T T m	Pentachlorophenol	0.00000	102.0	100.0	102.00
08-Feb-89 T T m	Pentachlorophenol	0.00000	4.00	100.0	4.00
08-Feb-89 T T m	Pentachlorophenol	0.00000		100.0	0
Number of Samples = 9			Below acceptance = 4		
Mean % Recovery = 59			Above acceptance = 0		
Standard Deviation = 58.47			Acceptance Criteria 14.00 - 176.00		
09-Jan-89 P m	Phenol	0.00000	79.0	100.0	79.00
09-Jan-89 P m	Phenol	0.00000	78.0	100.0	78.00
23-Jan-89 P m	Phenol	0.00000	77.0	100.0	77.00
06-Feb-89 T m	Phenol	0.00000	7.00	100.0	7.00
06-Feb-89 T m	Phenol	0.00000	7.00	100.0	7.00
07-Feb-89 T T m	Phenol	0.00000	110.0	100.0	110.00
07-Feb-89 T T m	Phenol	0.00000	120.0	100.0	120.00
08-Feb-89 T T m	Phenol	0.00000	68.0	100.0	68.00
08-Feb-89 T T m	Phenol	0.00000	80.0	100.0	80.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 69			Above acceptance = 1		
Standard Deviation = 39.26			Acceptance Criteria 5.00 - 112.00		
09-Jan-89 P s	Phenol-d5	0.00000	120.0	100.0	120.00
09-Jan-89 P s	Phenol-d5	0.00000	114.0	100.0	114.00
23-Jan-89 P s	Phenol-d5	0.00000	86.0	100.0	86.00
06-Feb-89 T s	Phenol-d5	0.00000	8.80	100.0	8.80
06-Feb-89 T s	Phenol-d5	0.00000	8.20	100.0	8.20
07-Feb-89 T T s	Phenol-d5	0.00000	87.0	100.0	87.00
07-Feb-89 T T s	Phenol-d5	0.00000	78.0	100.0	78.00
08-Feb-89 T T s	Phenol-d5	0.00000	27.0	100.0	27.00
08-Feb-89 T T s	Phenol-d5	0.00000	29.0	100.0	29.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
Number of Samples = 9			Below acceptance = 2		
Mean % Recovery = 62			Above acceptance = 2		
Standard Deviation = 44.10			Acceptance Criteria 10.00 - 94.00		
09-Jan-89 P	m Pyrene	0.00000	68.0	100.0	68.00
09-Jan-89 P	m Pyrene	0.00000	60.0	100.0	60.00
23-Jan-89 P	m Pyrene	0.00000	89.0	100.0	89.00
06-Feb-89 T	m Pyrene	0.00000	64.0	100.0	64.00
06-Feb-89 T	m Pyrene	0.00000	61.0	100.0	61.00
07-Feb-89 T T	m Pyrene	0.00000	76.0	100.0	76.00
07-Feb-89 T T	m Pyrene	0.00000	75.0	100.0	75.00
08-Feb-89 T T	m Pyrene	0.00000	62.0	100.0	62.00
08-Feb-89 T T	m Pyrene	0.00000	65.0	100.0	65.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 68			Above acceptance = 0		
Standard Deviation = 9.49			Acceptance Criteria 52.00 - 115.00		
09-Jan-89 P	s Terphenyl-d14	0.00000	69.0	100.0	69.00
09-Jan-89 P	s Terphenyl-d14	0.00000	89.0	100.0	89.00
23-Jan-89 P	s Terphenyl-d14	0.00000	101.0	100.0	101.00
06-Feb-89 T	s Terphenyl-d14	0.00000	64.0	100.0	64.00
06-Feb-89 T	s Terphenyl-d14	0.00000	102.0	100.0	102.00
07-Feb-89 T T	s Terphenyl-d14	0.00000	69.0	100.0	69.00
07-Feb-89 T T	s Terphenyl-d14	0.00000	76.0	100.0	76.00
08-Feb-89 T T	s Terphenyl-d14	0.00000	78.0	100.0	78.00
08-Feb-89 T T	s Terphenyl-d14	0.00000	77.0	100.0	77.00
Number of Samples = 9			Below acceptance = 0		
Mean % Recovery = 80			Above acceptance = 0		
Standard Deviation = 13.83			Acceptance Criteria 33.00 - 141.00		
09-Jan-89 P	m p-Chloro-m-cresol	0.00000	88.0	100.0	88.00
09-Jan-89 P	m p-Chloro-m-cresol	0.00000	87.0	100.0	87.00
23-Jan-89 P	m p-Chloro-m-cresol	0.00000	87.0	100.0	87.00
06-Feb-89 T	m p-Chloro-m-cresol	0.00000	8.00	100.0	8.00
06-Feb-89 T	m p-Chloro-m-cresol	0.00000	8.00	100.0	8.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Semivolatile Organics, Matrix Spike					
07-Feb-89 T T m	p-Chloro-m-cresol	0.00000	150.0	100.0	150.00
07-Feb-89 T T m	p-Chloro-m-cresol	0.00000	142.0	100.0	142.00
08-Feb-89 T T m	p-Chloro-m-cresol	0.00000	90.0	100.0	90.00
08-Feb-89 T T m	p-Chloro-m-cresol	0.00000	93.0	100.0	93.00

Number of Samples = 9 Below acceptance = 2
Mean % Recovery = 83 Above acceptance = 1
Standard Deviation = 49.27 Acceptance Criteria 22.00 - 147.00

Metals, Cold Vapor					
04-Jan-89 P m	Mercury	0.16	0.52	0.50	72.00
04-Jan-89 P m	Mercury	0.16	0.56	0.50	80.00
17-Mar-89 P m	Mercury	0.18	0.60	0.50	84.60
17-Mar-89 P m	Mercury	0.18	0.60	0.50	85.50
24-Jan-89 P B m	Mercury	ND 0.00020	0.0020	0.0020	100.00
24-Jan-89 P B m	Mercury	ND 0.00020	0.0018	0.0020	90.00
12-Jan-89 P E m	Mercury	ND 0.00020	0.0017	0.0020	85.00
16-Jan-89 P T m	Mercury	ND 0.00020	0.0019	0.0020	95.00
16-Jan-89 P T m	Mercury	ND 0.00020	0.0018	0.0020	90.00
16-Jan-89 P T m	Mercury	ND 0.00020	0.0015	0.0020	75.00
30-Jan-89 T m	Mercury	0.22	0.56	0.50	68.00
30-Jan-89 T m	Mercury	0.22	0.57	0.50	70.00
17-Mar-89 T m	Mercury	0.23	0.61	0.50	77.50
17-Mar-89 T m	Mercury	0.23	0.62	0.50	79.50
01-Feb-89 T A m	Mercury	ND 0.00030	0.00040	0.00040	100.00
01-Feb-89 T A m	Mercury	ND 0.00030	0.00040	0.00040	100.00
10-Feb-89 T A m	Mercury	ND 0.00030	0.0047	0.0040	117.50
10-Feb-89 T A m	Mercury	ND 0.00030	0.0048	0.0040	120.00
17-Feb-89 T A m	Mercury	ND 0.00030	0.0038	0.0040	95.00
17-Feb-89 T A m	Mercury	ND 0.00030	0.0036	0.0040	90.00
13-Mar-89 T A m	Mercury	ND 0.00020	0.0019	0.0020	95.00
13-Mar-89 T A m	Mercury	ND 0.00020	0.0019	0.0020	95.00
10-Feb-89 T B m	Mercury	ND 0.00030	0.0030	0.0040	75.00
10-Feb-89 T B m	Mercury	ND 0.00030	0.0029	0.0040	72.50
22-Feb-89 T B m	Mercury	ND 0.00030	0.0056	0.0040	140.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Cold Vapor					
22-Feb-89 T B m	Mercury	ND 0.00030	0.0052	0.0040	130.00
27-Feb-89 T B m	Mercury	ND 0.00020	0.0019	0.0020	95.00
27-Feb-89 T B m	Mercury	ND 0.00030	0.0037	0.0040	92.50
27-Feb-89 T B m	Mercury	ND 0.00030	0.0036	0.0040	90.00
07-Apr-89 T B m	Mercury	ND 0.00090	0.011	0.010	107.00
07-Apr-89 T B m	Mercury	ND 0.00020	0.0021	0.0020	105.00
07-Apr-89 T B m	Mercury	ND 0.00090	0.010	0.010	104.00
07-Apr-89 T B m	Mercury	ND 0.00090	0.011	0.010	107.00
07-Apr-89 T B m	Mercury	ND 0.00090	0.011	0.010	105.00
07-Apr-89 T B m	Mercury	ND 0.00020	0.0021	0.0020	105.00
15-Feb-89 T E m	Mercury	ND 0.00020	0.0039	0.0040	97.50
15-Feb-89 T E m	Mercury	ND 0.00020	0.0019	0.0020	95.00
15-Feb-89 T E m	Mercury	ND 0.00020	0.0019	0.0020	95.00
15-Feb-89 T E m	Mercury	ND 0.00020	0.0038	0.0040	95.00
02-Feb-89 T T m	Mercury	ND 0.00030	0.0034	0.0040	85.00
02-Feb-89 T T m	Mercury	ND 0.00030	0.0037	0.0040	92.50
08-Feb-89 T T m	Mercury	ND 0.00030	0.0040	0.0040	100.00
10-Feb-89 T T m	Mercury	ND 0.00030	0.0040	0.0040	100.00

Number of Samples = 43 — Below acceptance = 8
Mean % Recovery = 94 — Above acceptance = 2
Standard Deviation = 15.14 — Acceptance Criteria 80.00 - 120.00

Metals, Graphite Furnace					
23-Jan-89 P b	Arsenic, graphite AA	ND 0.0020	4.84	5.00	96.84
23-Jan-89 P m	Arsenic, graphite AA	95.1	90.4	2.40	0.00
23-Jan-89 P m	Arsenic, graphite AA	95.1	93.5	2.50	0.00
23-Mar-89 P m	Arsenic, graphite AA	109.7	12030	7519	158.54
23-Mar-89 P m	Arsenic, graphite AA	102.9	9825	8772	110.83
23-Mar-89 P m	Arsenic, graphite AA	102.9	10734	9174	115.88
23-Mar-89 P m	Arsenic, graphite AA	109.7	18429	8264	221.67
26-Jan-89 P B b	Arsenic, graphite AA	ND 0.0020	0.042	0.050	84.00
26-Jan-89 P B b	Arsenic, graphite AA	ND 0.0020	0.042	0.050	84.00
26-Jan-89 P B m	Arsenic, graphite AA	<5X 0.0030	0.049	0.050	92.00
26-Jan-89 P B m	Arsenic, graphite AA	<5X 0.0030	0.047	0.050	88.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace					
20-Jan-89 P T b	Arsenic, graphite AA	ND 0.0020	0.041	0.050	82.00
23-Jan-89 P T b	Arsenic, graphite AA	ND 0.0020	0.045	0.050	90.00
20-Jan-89 P T m	Arsenic, graphite AA	0.19	0.23	0.050	80.00
20-Jan-89 P T m	Arsenic, graphite AA	0.19	0.26	0.050	140.00
27-Jan-89 T b	Arsenic, graphite AA	ND 0.0020	0.046	0.050	92.00
27-Jan-89 T m	Arsenic, graphite AA	93.0	93.0	2.50	0.00
27-Jan-89 T m	Arsenic, graphite AA	93.0	82.0	2.50	0.00
23-Mar-89 T m	Arsenic, graphite AA	0.0090	0.052	0.050	86.00
23-Mar-89 T m	Arsenic, graphite AA	0.0090	0.047	0.050	76.00
01-Feb-89 T A b	Arsenic, graphite AA	ND 0.0020	0.045	0.050	90.00
08-Feb-89 T A b	Arsenic, graphite AA	ND 0.0020	0.042	0.050	84.00
24-Feb-89 T A b	Arsenic, graphite AA	ND 0.0020	0.045	0.050	90.00
09-Mar-89 T A b	Arsenic, graphite AA	ND 0.0020	0.042	0.050	84.00
01-Feb-89 T A m	Arsenic, graphite AA	ND 0.0020	0.049	0.050	98.00
01-Feb-89 T A m	Arsenic, graphite AA	ND 0.0020	0.048	0.050	96.00
08-Feb-89 T A m	Arsenic, graphite AA	ND 0.0020	0.047	0.050	94.00
08-Feb-89 T A m	Arsenic, graphite AA	ND 0.0020	0.047	0.050	94.00
24-Feb-89 T A m	Arsenic, graphite AA	<5X 0.0060	0.048	0.050	84.00
24-Feb-89 T A m	Arsenic, graphite AA	<5X 0.0060	0.047	0.050	82.00
09-Mar-89 T A m	Arsenic, graphite AA	<5X 0.0080	0.048	0.050	80.00
09-Mar-89 T A m	Arsenic, graphite AA	<5X 0.0080	0.049	0.050	82.00
10-Feb-89 T B b	Arsenic, graphite AA	ND 0.0020	0.043	0.050	86.00
24-Feb-89 T B b	Arsenic, graphite AA	ND 0.0020	0.043	0.050	86.00
03-Mar-89 T B b	Arsenic, graphite AA	ND 0.0020	0.044	0.050	88.00
09-Feb-89 T B m	Arsenic, graphite AA	0.021	0.066	0.050	90.00
09-Feb-89 T B m	Arsenic, graphite AA	0.021	0.065	0.050	88.00
24-Feb-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.046	0.050	86.00
24-Feb-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.043	0.050	80.00
02-Mar-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.036	0.050	66.00
02-Mar-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.036	0.050	66.00
03-Mar-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.049	0.050	92.00
03-Mar-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.050	0.050	94.00
08-Mar-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.053	0.050	100.00
08-Mar-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.055	0.050	104.00
03-Apr-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.032	0.050	58.00
03-Apr-89 T B m	Arsenic, graphite AA	<5X 0.0030	0.030	0.050	54.00
23-Jan-89 T E b	Arsenic, graphite AA	ND 0.0030	0.053	0.050	106.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace					
10-Feb-89 T E b	Arsenic, graphite AA	ND 0.0020	0.046	0.050	92.00
21-Feb-89 T E b	Arsenic, graphite AA	ND 0.0020	0.043	0.050	86.00
21-Feb-89 T E m	Arsenic, graphite AA	ND 0.031	0.078	0.050	156.00
21-Feb-89 T E m	Arsenic, graphite AA	ND 0.031	0.080	0.050	160.00
21-Feb-89 T E m	Arsenic, graphite AA	<5X 0.0020	0.039	0.050	74.00
03-Apr-89 T E m	Arsenic, graphite AA	<5X 0.0020	0.039	0.050	74.00
03-Apr-89 T E m	Arsenic, graphite AA	<5X 0.0010	0.038	0.050	74.00
03-Feb-89 T T b	Arsenic, graphite AA	<5X 0.0010	0.037	0.050	72.00
23-Mar-89 T T b	Arsenic, graphite AA	ND 0.0020	0.043	0.050	86.00
03-Apr-89 T T b	Arsenic, graphite AA	ND 0.0010	0.046	0.050	92.00
11-Apr-89 T T b	Arsenic, graphite AA	ND 0.0020	0.041	0.050	82.00
03-Feb-89 T T m	Arsenic, graphite AA	ND 0.0020	0.042	0.050	84.00
03-Feb-89 T T m	Arsenic, graphite AA	ND 0.0020	0.035	0.050	70.00
09-Feb-89 T T m	Arsenic, graphite AA	ND 0.0020	0.037	0.050	74.00
09-Feb-89 T T m	Arsenic, graphite AA	ND 0.0020	0.041	0.050	82.00
03-Apr-89 T T m	Arsenic, graphite AA	ND 0.0020	0.041	0.050	82.00
03-Apr-89 T T m	Arsenic, graphite AA	<5X 0.0030	0.040	0.050	74.00
11-Apr-89 T T m	Arsenic, graphite AA	<5X 0.0030	0.040	0.050	74.00
11-Apr-89 T T m	Arsenic, graphite AA	0.21	0.19	0.050	0.00
		0.21	0.25	0.050	62.00

Number of Samples = 68
Mean % Recovery = 84
Standard Deviation = 34.95

Below acceptance = 19
Above acceptance = 5
Acceptance Criteria 80.00 - 120.00

31-Mar-89 P B b	Lead, graphite AA	ND 0.0020	0.053	0.050	106.00
07-Apr-89 P B b	Lead, graphite AA	ND 0.0020	0.048	0.050	96.00
31-Mar-89 P B m	Lead, graphite AA	0.32	0.25	0.050	0.00
31-Mar-89 P B m	Lead, graphite AA	0.32	0.27	0.050	0.00
31-Mar-89 P T b	Lead, graphite AA	ND 0.0020	0.050	0.050	100.00
11-Apr-89 P T b	Lead, graphite AA	ND 0.0020	0.050	0.050	100.00
11-Apr-89 P T m	Lead, graphite AA	0.70	0.55	0.050	0.00
11-Apr-89 P T m	Lead, graphite AA	0.70	0.75	0.050	100.00
04-Apr-89 T A m	Lead, graphite AA	0.020	0.041	0.050	42.00
04-Apr-89 T A m	Lead, graphite AA	0.020	0.041	0.050	42.00
04-Apr-89 T E b	Lead, graphite AA	ND 0.0020	0.047	0.050	94.00
04-Apr-89 T E m	Lead, graphite AA	0.015	0.058	0.050	86.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace					
04-Apr-89 T E m	Lead, graphite AA	0.015	0.061	0.050	92.00
14-Mar-89 T T b	Lead, graphite AA	ND 0.0020	0.042	0.050	84.00
20-Mar-89 T T b	Lead, graphite AA	ND 0.0020	0.051	0.050	102.00
31-Mar-89 T T b	Lead, graphite AA	ND 0.0020	0.054	0.050	108.00
04-Apr-89 T T b	Lead, graphite AA	ND 0.0020	0.043	0.050	86.00
07-Apr-89 T T b	Lead, graphite AA	ND 0.0020	0.052	0.050	104.00
14-Mar-89 T T m	Lead, graphite AA	ND 0.0020	0.047	0.050	94.00
14-Mar-89 T T m	Lead, graphite AA	ND 0.0020	0.054	0.050	108.00
04-Apr-89 T T m	Lead, graphite AA	<5X 0.0020	0.040	0.050	76.00
04-Apr-89 T T m	Lead, graphite AA	<5X 0.0020	0.048	0.050	92.00

Number of Samples = 22
Mean % Recovery = 77
Standard Deviation = 36.20

Below acceptance = 6
Above acceptance = 0
Acceptance Criteria 80.00 - 120.00

19-Jan-89 P b	Selenium, graphite AA	ND 0.0050	0.010	0.010	100.00
19-Jan-89 P m	Selenium, graphite AA	<5X 0.28	<5X 0.49	0.48	43.75
19-Jan-89 P m	Selenium, graphite AA	<5X 0.28	<5X 0.58	0.50	60.00
16-Mar-89 P m	Selenium, graphite AA	ND 0.34	145.0	165.0	87.88
16-Mar-89 P m	Selenium, graphite AA	ND 0.34	126.0	150.0	84.00
25-Jan-89 P B b	Selenium, graphite AA	ND 0.0050	0.042	0.050	84.00
25-Jan-89 P B b	Selenium, graphite AA	ND 0.0050	0.042	0.050	84.00
25-Jan-89 P B m	Selenium, graphite AA	ND 0.0050	0.043	0.050	86.00
25-Jan-89 P B m	Selenium, graphite AA	ND 0.0050	0.043	0.050	86.00
20-Jan-89 P E b	Selenium, graphite AA	ND 0.040	0.049	0.050	98.00
20-Jan-89 P E m	Selenium, graphite AA	ND 0.0040	0.019	0.050	38.00
19-Jan-89 P T b	Selenium, graphite AA	ND 0.0040	0.043	0.050	86.00
20-Jan-89 P T b	Selenium, graphite AA	ND 0.0050	0.051	0.050	102.00
11-Apr-89 P T b	Selenium, graphite AA	ND 0.0020	0.052	0.050	104.00
19-Jan-89 P T m	Selenium, graphite AA	ND 0.0050	ND 0.0040	0.050	0.00
19-Jan-89 P T m	Selenium, graphite AA	ND 0.0050	ND 0.0040	0.050	0.00
11-Apr-89 P T m	Selenium, graphite AA	ND 0.0020	0.024	0.050	48.00
11-Apr-89 P T m	Selenium, graphite AA	ND 0.0020	0.014	0.050	28.00
27-Jan-89 T b	Selenium, graphite AA	ND 0.0050	0.050	0.050	100.00
27-Jan-89 T m	Selenium, graphite AA	ND 0.24	ND 0.25	2.50	0.00
27-Jan-89 T m	Selenium, graphite AA	ND 0.24	ND 0.25	2.50	0.00
16-Mar-89 T m	Selenium, graphite AA	ND 0.0040	0.032	0.050	64.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace					
16-Mar-89 T m	Selenium, graphite AA	ND 0.29	87.9	180.0	48.83
16-Mar-89 T m	Selenium, graphite AA	ND 0.29	125.0	180.0	69.44
16-Mar-89 T m	Selenium, graphite AA	ND 0.0040	0.035	0.050	70.00
01-Feb-89 T A b	Selenium, graphite AA	ND 0.0040	0.057	0.050	114.00
07-Feb-89 T A b	Selenium, graphite AA	ND 0.0050	0.045	0.050	90.00
01-Mar-89 T A b	Selenium, graphite AA	ND 0.0040	0.048	0.050	96.00
09-Mar-89 T A b	Selenium, graphite AA	ND 0.0040	0.047	0.050	94.00
01-Feb-89 T A m	Selenium, graphite AA	ND 0.0040	0.059	0.050	118.00
01-Feb-89 T A m	Selenium, graphite AA	ND 0.0040	0.060	0.050	120.00
07-Feb-89 T A m	Selenium, graphite AA	ND 0.0050	0.050	0.050	100.00
07-Feb-89 T A m	Selenium, graphite AA	ND 0.0050	0.050	0.050	100.00
01-Mar-89 T A m	Selenium, graphite AA	ND 0.0040	0.048	0.050	96.00
01-Mar-89 T A m	Selenium, graphite AA	ND 0.0040	0.047	0.050	94.00
09-Mar-89 T A m	Selenium, graphite AA	ND 0.0080	0.045	0.050	90.00
09-Mar-89 T A m	Selenium, graphite AA	ND 0.0080	0.044	0.050	88.00
16-Feb-89 T B b	Selenium, graphite AA	ND 0.0040	0.042	0.050	84.00
01-Mar-89 T B b	Selenium, graphite AA	ND 0.0040	0.048	0.050	96.00
03-Mar-89 T B b	Selenium, graphite AA	ND 0.0020	0.038	0.050	76.00
11-Apr-89 T B b	Selenium, graphite AA	ND 0.0020	0.044	0.050	88.00
10-Feb-89 T B m	Selenium, graphite AA	<5X 0.0080	0.083	0.050	150.00
10-Feb-89 T B m	Selenium, graphite AA	<5X 0.0080	0.079	0.050	142.00
01-Mar-89 T B m	Selenium, graphite AA	ND 0.0040	0.046	0.050	92.00
01-Mar-89 T B m	Selenium, graphite AA	ND 0.0040	0.048	0.050	96.00
03-Mar-89 T B m	Selenium, graphite AA	<5X 0.0040	0.035	0.050	62.00
03-Mar-89 T B m	Selenium, graphite AA	<5X 0.0040	0.037	0.050	66.00
03-Mar-89 T B m	Selenium, graphite AA	ND 0.0020	0.038	0.050	76.00
03-Mar-89 T B m	Selenium, graphite AA	ND 0.0020	0.037	0.050	74.00
08-Mar-89 T B m	Selenium, graphite AA	ND 0.0020	0.048	0.050	96.00
08-Mar-89 T B m	Selenium, graphite AA	ND 0.0020	0.048	0.050	96.00
11-Apr-89 T B m	Selenium, graphite AA	ND 0.0020	0.029	0.050	58.00
11-Apr-89 T B m	Selenium, graphite AA	ND 0.0020	0.030	0.050	60.00
11-Apr-89 T B m	Selenium, graphite AA	ND 0.0020	0.023	0.050	46.00
11-Apr-89 T B m	Selenium, graphite AA	ND 0.0020	0.025	0.050	50.00
21-Feb-89 T E b	Selenium, graphite AA	ND 0.0050	0.055	0.050	110.00
21-Feb-89 T E b	Selenium, graphite AA	ND 0.0050	0.042	0.050	84.00
21-Feb-89 T E m	Selenium, graphite AA	ND 0.0050	0.014	0.050	28.00
21-Feb-89 T E m	Selenium, graphite AA	ND 0.0050	0.025	0.050	50.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace					
21-Feb-89 T E m	Selenium, graphite AA	ND 0.0050	0.014	0.050	28.00
21-Feb-89 T E m	Selenium, graphite AA	ND 0.0050	0.024	0.050	48.00
11-Apr-89 T E m	Selenium, graphite AA	ND 0.0020	<5X 0.0020	0.050	4.00
11-Apr-89 T E m	Selenium, graphite AA	ND 0.0020	ND 0.0020	0.050	0.00
11-Apr-89 T E m	Selenium, graphite AA	ND 0.0020	ND 0.0020	0.050	0.00
11-Apr-89 T E m	Selenium, graphite AA	ND 0.0020	ND 0.0020	0.050	0.00
03-Feb-89 T T b	Selenium, graphite AA	ND 0.0050	0.060	0.050	120.00
15-Mar-89 T T b	Selenium, graphite AA	ND 0.0040	0.047	0.050	94.00
03-Feb-89 T T m	Selenium, graphite AA	ND 0.0050	ND 0.0050	0.050	0.00
03-Feb-89 T T m	Selenium, graphite AA	ND 0.0050	<5X 0.0070	0.050	14.00
07-Feb-89 T T m	Selenium, graphite AA	ND 0.0050	<5X 0.0050	0.050	10.00
07-Feb-89 T T m	Selenium, graphite AA	ND 0.0050	<5X 0.0050	0.050	10.00
11-Apr-89 T T m	Selenium, graphite AA	ND 0.0020	ND 0.0020	0.050	0.00
11-Apr-89 T T m	Selenium, graphite AA	ND 0.0020	<5X 0.0060	0.050	12.00
11-Apr-89 T T m	Selenium, graphite AA	ND 0.0020	<5X 0.0040	0.050	8.00
11-Apr-89 T T m	Selenium, graphite AA	ND 0.0020	ND 0.0020	0.050	0.00

Number of Samples = 75 Below acceptance = 38
Mean % Recovery = 65 Above acceptance = 2
Standard Deviation = 39.99 Acceptance Criteria 80.00 - 120.00

18-Jan-89 P m	Thallium, graphite AA	ND 0.0010	0.011	0.010	110.00
18-Jan-89 P m	Thallium, graphite AA	ND 0.048	0.36	0.50	72.60
18-Jan-89 P m	Thallium, graphite AA	ND 0.048	0.37	0.50	73.00
14-Mar-89 P m	Thallium, graphite AA	0.47	76.7	150.0	50.82
14-Mar-89 P m	Thallium, graphite AA	0.47	82.6	165.0	49.78
26-Jan-89 P B b	Thallium, graphite AA	<5X 0.0020	0.043	0.050	82.00
26-Jan-89 P B m	Thallium, graphite AA	<5X 0.0020	0.044	0.050	84.00
26-Jan-89 P B m	Thallium, graphite AA	<5X 0.0020	0.044	0.050	84.00
26-Jan-89 P B m	Thallium, graphite AA	<5X 0.0020	0.042	0.050	80.00
20-Jan-89 P E b	Thallium, graphite AA	ND 0.0010	0.046	0.050	92.00
20-Jan-89 P E m	Thallium, graphite AA	ND 0.0010	0.046	0.050	92.00
20-Jan-89 P T b	Thallium, graphite AA	ND 0.0010	0.040	0.050	80.00
11-Apr-89 P T b	Thallium, graphite AA	ND 0.0020	0.049	0.050	98.00
20-Jan-89 P T m	Thallium, graphite AA	ND 0.0010	ND 0.0010	0.050	0.00
20-Jan-89 P T m	Thallium, graphite AA	ND 0.0010	ND 0.0010	0.050	0.00
11-Apr-89 P T m	Thallium, graphite AA	ND 0.0020	0.041	0.050	82.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result		Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace						
11-Apr-89 P T m	Thallium, graphite AA	ND 0.0020	<5X	0.022	0.050	44.00
27-Jan-89 T b	Thallium, graphite AA	ND 0.0020		0.044	0.050	88.00
27-Jan-89 T m	Thallium, graphite AA	ND 0.10		1.10	2.50	44.00
27-Jan-89 T m	Thallium, graphite AA	ND 0.10		1.20	2.50	48.00
14-Mar-89 T m	Thallium, graphite AA	0.69		61.4	175.0	34.69
14-Mar-89 T m	Thallium, graphite AA	0.69		71.6	183.0	38.75
14-Mar-89 T m	Thallium, graphite AA	ND 0.0020		0.021	0.050	42.00
14-Mar-89 T m	Thallium, graphite AA	ND 0.0020		0.018	0.050	36.00
01-Feb-89 T A b	Thallium, graphite AA	ND 0.0010		0.046	0.050	92.00
27-Feb-89 T A b	Thallium, graphite AA	ND 0.0010		0.045	0.050	90.00
09-Mar-89 T A b	Thallium, graphite AA	ND 0.0020		0.047	0.050	94.00
01-Feb-89 T A m	Thallium, graphite AA	<5X 0.0030		0.048	0.050	90.00
01-Feb-89 T A m	Thallium, graphite AA	<5X 0.0030		0.045	0.050	84.00
10-Feb-89 T A m	Thallium, graphite AA	ND 0.0020		0.041	0.050	82.00
10-Feb-89 T A m	Thallium, graphite AA	ND 0.0020		0.043	0.050	86.00
27-Feb-89 T A m	Thallium, graphite AA	ND 0.0010		0.039	0.050	78.00
27-Feb-89 T A m	Thallium, graphite AA	ND 0.0010		0.037	0.050	74.00
09-Mar-89 T A m	Thallium, graphite AA	ND 0.0020		0.041	0.050	82.00
09-Mar-89 T A m	Thallium, graphite AA	ND 0.0020		0.042	0.050	84.00
04-Apr-89 T A m	Thallium, graphite AA	ND 0.0020		0.036	0.050	72.00
04-Apr-89 T A m	Thallium, graphite AA	ND 0.0020		0.039	0.050	78.00
27-Jan-89 T B b	Thallium, graphite AA	ND 0.0020		0.044	0.050	88.00
13-Feb-89 T B b	Thallium, graphite AA	ND 0.0020		0.050	0.050	100.00
27-Feb-89 T B b	Thallium, graphite AA	ND 0.0010		0.045	0.050	90.00
03-Mar-89 T B b	Thallium, graphite AA	ND 0.0010		0.051	0.050	102.00
04-Apr-89 T B b	Thallium, graphite AA	ND 0.0020		0.050	0.050	100.00
04-Apr-89 T B b	Thallium, graphite AA	ND 0.0020		0.045	0.050	90.00
13-Feb-89 T B m	Thallium, graphite AA	ND 0.0020		0.027	0.050	54.00
13-Feb-89 T B m	Thallium, graphite AA	ND 0.0020		0.025	0.050	50.00
27-Feb-89 T B m	Thallium, graphite AA	ND 0.0020		0.026	0.050	52.00
27-Feb-89 T B m	Thallium, graphite AA	ND 0.020		0.035	0.050	70.00
03-Mar-89 T B m	Thallium, graphite AA	ND 0.0020		0.043	0.050	86.00
03-Mar-89 T B m	Thallium, graphite AA	ND 0.0020		0.041	0.050	82.00
03-Mar-89 T B m	Thallium, graphite AA	ND 0.0010		0.050	0.050	100.00
03-Mar-89 T B m	Thallium, graphite AA	ND 0.0010		0.048	0.050	96.00
08-Mar-89 T B m	Thallium, graphite AA	ND 0.0020		0.056	0.050	112.00
08-Mar-89 T B m	Thallium, graphite AA	ND 0.0020		0.055	0.050	110.00

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, Graphite Furnace					
04-Apr-89 T B m	Thallium, graphite AA	ND 0.0020	0.035	0.050	70.00
04-Apr-89 T B m	Thallium, graphite AA	ND 0.0020	0.033	0.050	66.00
04-Apr-89 T B m	Thallium, graphite AA	ND 0.0020	0.031	0.050	62.00
04-Apr-89 T B m	Thallium, graphite AA	ND 0.0020	0.031	0.050	62.00
21-Feb-89 T E b	Thallium, graphite AA	ND 0.0010	0.045	0.050	90.00
21-Feb-89 T E b	Thallium, graphite AA	ND 0.0010	0.050	0.050	100.00
21-Feb-89 T E m	Thallium, graphite AA	ND 0.0010	0.011	0.050	22.00
21-Feb-89 T E m	Thallium, graphite AA	ND 0.0010	0.012	0.050	24.00
21-Feb-89 T E m	Thallium, graphite AA	ND 0.0010	0.0040	0.050	8.00
21-Feb-89 T E m	Thallium, graphite AA	ND 0.0010	0.0040	0.050	8.00
04-Apr-89 T E m	Thallium, graphite AA	ND 0.0020	0.015	0.050	30.00
04-Apr-89 T E m	Thallium, graphite AA	ND 0.0020	0.022	0.050	44.00
04-Apr-89 T E m	Thallium, graphite AA	ND 0.0020	0.023	0.050	46.00
04-Apr-89 T E m	Thallium, graphite AA	ND 0.0020	0.016	0.050	32.00
03-Feb-89 T T b	Thallium, graphite AA	ND 0.0010	0.048	0.050	96.00
17-Mar-89 T T b	Thallium, graphite AA	ND 0.0020	0.044	0.050	88.00
03-Feb-89 T T m	Thallium, graphite AA	ND 0.0010	0.026	0.050	52.00
03-Feb-89 T T m	Thallium, graphite AA	ND 0.0010	0.027	0.050	54.00
10-Feb-89 T T m	Thallium, graphite AA	ND 0.0020	0.013	0.050	26.00
10-Feb-89 T T m	Thallium, graphite AA	ND 0.0020	0.013	0.050	26.00
04-Apr-89 T T m	Thallium, graphite AA	ND 0.0020	0.014	0.050	28.00
04-Apr-89 T T m	Thallium, graphite AA	ND 0.0020	0.014	0.050	28.00
04-Apr-89 T T m	Thallium, graphite AA	ND 0.0020	0.017	0.050	34.00
04-Apr-89 T T m	Thallium, graphite AA	ND 0.0020	0.018	0.050	36.00

Number of Samples = 77 — Below acceptance = 41
Mean % Recovery = 66 — Above acceptance = 0
Standard Deviation = 28.69 — Acceptance Criteria 80.00 - 120.00

Infrared Methods					
13-Feb-89 T	m	Oil and grease, infrared	69500	0.94	103000	0.00
13-Feb-89 T	m	Oil and grease, infrared	69500	0.94	103000	0.00

Number of Samples = 2 — Below acceptance = 2
Mean % Recovery = — Above acceptance = 0

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Infrared Methods					
Standard Deviation =	.00		Acceptance Criteria	80.00 - 120.00	
24-Jan-89 P B m Total organic carbon		180.0	290.0	120.0	91.67
24-Jan-89 P B m Total organic carbon		180.0	290.0	120.0	91.67
24-Jan-89 P B m Total organic carbon		180.0	300.0	120.0	100.00
24-Jan-89 P B m Total organic carbon		23.0	46.0	25.0	92.00
24-Jan-89 P B m Total organic carbon		180.0	300.0	120.0	100.00
24-Jan-89 P B m Total organic carbon		190.0	330.0	125.0	112.00
24-Jan-89 P B m Total organic carbon		23.0	47.0	25.0	96.00
24-Jan-89 P B m Total organic carbon		25.0	47.0	25.0	88.00
24-Jan-89 P B m Total organic carbon		25.0	47.0	25.0	88.00
13-Feb-89 T A b Total organic carbon		190.0	330.0	125.0	112.00
13-Feb-89 T A m Total organic carbon	<5X	1.30	27.0	30.0	85.67
13-Feb-89 T A m Total organic carbon		13.0	40.0	30.0	90.00
13-Feb-89 T A m Total organic carbon		10.0	37.0	30.0	90.00
13-Feb-89 T A m Total organic carbon		13.0	39.0	30.0	86.67
13-Feb-89 T A m Total organic carbon		10.0	38.0	30.0	93.33
13-Feb-89 T A m Total organic carbon		13.5	41.2	30.0	92.27
13-Feb-89 T A m Total organic carbon		13.5	41.2	30.0	92.27
13-Feb-89 T A m Total organic carbon	<5X	4.20	25.0	22.0	94.55
10-Mar-89 T A m Total organic carbon	<5X	4.20	24.0	22.0	90.00
10-Mar-89 T A m Total organic carbon		19.5	45.0	25.0	102.00
20-Feb-89 T B b Total organic carbon		19.5	44.3	25.0	99.20
13-Feb-89 T B m Total organic carbon	<5X	1.15	23.3	25.0	88.72
13-Feb-89 T B m Total organic carbon		57.0	90.0	30.0	110.00
20-Feb-89 T B m Total organic carbon		57.0	88.0	30.0	103.33
20-Feb-89 T B m Total organic carbon		34.5	83.3	25.0	195.20
20-Feb-89 T B m Total organic carbon		34.5	81.2	25.0	186.80
20-Feb-89 T B m Total organic carbon		13.8	38.0	25.0	96.44
06-Mar-89 T B m Total organic carbon		13.8	38.0	25.0	96.72
06-Mar-89 T B m Total organic carbon		114.0	242.0	125.0	102.40
		114.0	242.0	125.0	102.40

Number of Samples = 30
Mean % Recovery = 102
Standard Deviation = 25.18

Below acceptance = 0
Above acceptance = 2
Acceptance Criteria 80.00 - 120.00

NC: Not Calculable
Matrix: P = Pretreatment, T = Treated
Submatrix: T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result	Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES					
09-Jan-89 P b	Aluminum, ICPES	ND 0.20	3.97	5.00	79.40
26-Jan-89 P b	Aluminum, ICPES	ND 0.20	17.4	20.0	87.00
09-Jan-89 P m	Aluminum, ICPES	3600	4010	238.0	172.27
09-Jan-89 P m	Aluminum, ICPES	3600	4240	246.0	260.16
26-Jan-89 P m	Aluminum, ICPES	5330	5690	463.0	77.75
26-Jan-89 P m	Aluminum, ICPES	5330	5990	483.0	136.65
15-Mar-89 P m	Aluminum, ICPES	4540	440000	438500	99.31
15-Mar-89 P m	Aluminum, ICPES	4540	545000	458500	117.88
17-Jan-89 P B b	Aluminum, ICPES	ND 0.20	9.00	10.0	90.00
25-Jan-89 P B b	Aluminum, ICPES	ND 0.20	8.40	10.0	84.00
04-Apr-89 P B b	Aluminum, ICPES	ND 0.20	8.95	10.0	89.50
25-Jan-89 P B m	Aluminum, ICPES	ND 0.20	7.80	10.0	78.00
25-Jan-89 P B m	Aluminum, ICPES	ND 0.20	7.70	10.0	77.00
04-Apr-89 P B m	Aluminum, ICPES	ND 0.20	8.93	10.0	89.30
04-Apr-89 P B m	Aluminum, ICPES	ND 0.20	8.92	10.0	89.20
23-Jan-89 P T b	Aluminum, ICPES	ND 0.20	9.30	10.0	93.00
04-Apr-89 P T b	Aluminum, ICPES	ND 0.20	9.24	10.0	92.40
23-Jan-89 P T m	Aluminum, ICPES	<5X 0.60	9.30	10.0	87.00
23-Jan-89 P T m	Aluminum, ICPES	<5X 0.60	9.20	10.0	86.00
04-Apr-89 P T m	Aluminum, ICPES	<5X 0.56	9.93	10.0	93.75
04-Apr-89 P T m	Aluminum, ICPES	<5X 0.56	9.83	10.0	92.75
27-Jan-89 T b	Aluminum, ICPES	ND 0.20	18.0	20.0	90.00
27-Jan-89 T m	Aluminum, ICPES	11100	11300	1000	20.00
27-Jan-89 T m	Aluminum, ICPES	11100	11200	1000	10.00
20-Mar-89 T m	Aluminum, ICPES	7750	450000	410000	107.87
20-Mar-89 T m	Aluminum, ICPES	7750	531000	485500	107.78
07-Feb-89 T A b	Aluminum, ICPES	ND 0.20	9.70	10.0	97.00
07-Feb-89 T A b	Aluminum, ICPES	ND 0.20	9.00	10.0	90.00
04-Mar-89 T A b	Aluminum, ICPES	ND 0.20	8.94	10.0	89.40
07-Mar-89 T A b	Aluminum, ICPES	ND 0.20	8.61	10.0	86.10
12-Apr-89 T A b	Aluminum, ICPES	ND 0.20	9.23	10.0	92.30
06-Feb-89 T A m	Aluminum, ICPES	ND 0.20	9.50	10.0	95.00
06-Feb-89 T A m	Aluminum, ICPES	ND 0.20	9.60	10.0	96.00
07-Feb-89 T A m	Aluminum, ICPES	<5X 0.21	9.30	10.0	90.90
07-Feb-89 T A m	Aluminum, ICPES	<5X 0.21	9.30	10.0	90.90
04-Mar-89 T A m	Aluminum, ICPES	<5X 0.73	9.29	10.0	85.64
04-Mar-89 T A m	Aluminum, ICPES	<5X 0.73	9.60	10.0	88.74

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.10 DETAILED SPIKE RESULTS

Date/Matrix/Submatrix/Type	Parameter	Sample Result		Spiked Sample Result	Spike Added	% Recovery
Metals, ICPES						
08-Mar-89 T A m	Aluminum, ICPES	<5X	0.47	8.20	10.0	77.34
08-Mar-89 T A m	Aluminum, ICPES	<5X	0.47	8.50	10.0	80.34
04-Apr-89 T A m	Aluminum, ICPES	<5X	0.44	9.05	10.0	86.06
04-Apr-89 T A m	Aluminum, ICPES	<5X	0.44	8.80	10.0	83.56
10-Feb-89 T B b	Aluminum, ICPES	ND	0.20	8.99	10.0	89.86
22-Feb-89 T B b	Aluminum, ICPES	ND	0.20	8.44	10.0	84.39
07-Feb-89 T B m	Aluminum, ICPES	ND	0.20	8.70	10.0	87.00
07-Feb-89 T B m	Aluminum, ICPES	ND	0.20	8.70	10.0	87.00
10-Feb-89 T B m	Aluminum, ICPES	<5X	0.92	9.68	10.0	87.57
10-Feb-89 T B m	Aluminum, ICPES	<5X	0.92	9.83	10.0	89.07
27-Feb-89 T B m	Aluminum, ICPES	<5X	0.42	10.1	10.0	96.76
27-Feb-89 T B m	Aluminum, ICPES	<5X	0.42	9.88	10.0	94.56
04-Mar-89 T B m	Aluminum, ICPES	<5X	0.41	9.48	10.0	90.75
04-Mar-89 T B m	Aluminum, ICPES	<5X	0.41	9.51	10.0	91.05
04-Mar-89 T B m	Aluminum, ICPES		4.68	13.9	10.0	92.20
04-Mar-89 T B m	Aluminum, ICPES		4.68	13.8	10.0	91.20
08-Mar-89 T B m	Aluminum, ICPES	<5X	0.30	9.48	10.0	91.84
08-Mar-89 T B m	Aluminum, ICPES	<5X	0.30	9.28	10.0	89.81
04-Apr-89 T B m	Aluminum, ICPES	<5X	0.60	10.7	10.0	100.96
04-Apr-89 T B m	Aluminum, ICPES	<5X	0.60	10.3	10.0	96.96
21-Feb-89 T E b	Aluminum, ICPES	ND	0.20	9.36	10.0	93.60
21-Feb-89 T E m	Aluminum, ICPES	ND	0.20	8.95	10.0	89.50
21-Feb-89 T E m	Aluminum, ICPES		0.27	9.21	10.0	89.40
21-Feb-89 T E m	Aluminum, ICPES		0.27	9.37	10.0	91.00
21-Feb-89 T E m	Aluminum, ICPES	ND	0.20	9.04	10.0	90.40
04-Apr-89 T E m	Aluminum, ICPES	ND	0.20	8.82	10.0	88.20
04-Apr-89 T E m	Aluminum, ICPES	ND	0.20	9.97	10.0	99.70
04-Apr-89 T E m	Aluminum, ICPES	ND	0.20	8.90	10.0	89.00
04-Apr-89 T E m	Aluminum, ICPES	ND	0.20	9.36	10.0	93.60
07-Feb-89 T T b	Aluminum, ICPES	ND	0.20	8.90	10.0	89.00
04-Apr-89 T T b	Aluminum, ICPES	ND	0.20	9.14	10.0	91.40
07-Feb-89 T T m	Aluminum, ICPES	ND	0.20	8.40	10.0	84.00
07-Feb-89 T T m	Aluminum, ICPES	<5X	0.52	9.20	10.0	86.80
07-Feb-89 T T m	Aluminum, ICPES	<5X	0.52	9.60	10.0	90.80
07-Feb-89 T T m	Aluminum, ICPES	ND	0.20	8.70	10.0	87.00
04-Apr-89 T T m	Aluminum, ICPES	<5X	0.77	10.0	10.0	92.30
04-Apr-89 T T m	Aluminum, ICPES	ND	0.20	8.95	10.0	89.50

NC: Not Calculable

Matrix: P = Pretreatment, T = Treated

Submatrix: T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: b = Method Spike, s = Surrogate Spike, m = Matrix Spike

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
09-Jan-89 P p	Aluminum, ICPES	ND	0.20
26-Jan-89 P p	Aluminum, ICPES	ND	0.20
17-Apr-89 P p	Aluminum, ICPES	<5X	0.21
18-Jan-89 P B B	Aluminum, ICPES	ND	0.20
18-Jan-89 P B p	Aluminum, ICPES	ND	0.20
23-Jan-89 P B p	Aluminum, ICPES	ND	0.20
25-Jan-89 P B p	Aluminum, ICPES	ND	0.20
04-Apr-89 P B p	Aluminum, ICPES	ND	0.20
18-Jan-89 P E E	Aluminum, ICPES	ND	0.20
18-Jan-89 P E p	Aluminum, ICPES	ND	0.20
20-Mar-89 P E p	Aluminum, ICPES	ND	0.20
23-Jan-89 P T T	Aluminum, ICPES	ND	0.20
23-Jan-89 P T p	Aluminum, ICPES	ND	0.20
27-Jan-89 T p	Aluminum, ICPES	ND	0.20
06-Feb-89 T A p	Aluminum, ICPES	ND	0.20
08-Feb-89 T A p	Aluminum, ICPES	ND	0.20
04-Mar-89 T A p	Aluminum, ICPES	ND	0.20
04-Mar-89 T A p	Aluminum, ICPES	ND	0.20
04-Mar-89 T A p	Aluminum, ICPES	ND	0.20
08-Mar-89 T A p	Aluminum, ICPES	ND	0.20
12-Apr-89 T A p	Aluminum, ICPES	ND	0.20
10-Feb-89 T B p	Aluminum, ICPES	ND	0.20
23-Feb-89 T B p	Aluminum, ICPES	ND	0.20
27-Feb-89 T B p	Aluminum, ICPES	ND	0.20
21-Feb-89 T E E	Aluminum, ICPES	ND	0.20
21-Feb-89 T E p	Aluminum, ICPES	ND	0.20
04-Apr-89 T E p	Aluminum, ICPES	<5X	0.22
08-Feb-89 T T T	Aluminum, ICPES	ND	0.20
07-Feb-89 T T p	Aluminum, ICPES	ND	0.20
08-Feb-89 T T p	Aluminum, ICPES	ND	0.20
25-May-89 T T p	Aluminum, ICPES	ND	0.20
26-May-89 T T p	Aluminum, ICPES	ND	0.20

Total Number of Blanks = 32 Concentration Range 0.21 - 0.22

Total Number above Detection Limit = 2 Maximum Detection Limit = 0.20

Matrix: P = Pretreatment, T = Treated

Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution

E = EP Leaching Solution, B = BET Leaching Solution

A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,

r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
07-Feb-89 T T p	Copper, ICPES	ND	0.020
08-Feb-89 T T p	Copper, ICPES	ND	0.020
15-Mar-89 T T p	Copper, ICPES	ND	0.020
25-May-89 T T p	Copper, ICPES	ND	0.020
26-May-89 T T p	Copper, ICPES	<5X	0.025
Total Number of Blanks = 31		Concentration Range	0.025 - 0.090
Total Number above Detection Limit = 4		Maximum Detection Limit = 0.020	
09-Jan-89 P p	Lead, ICPES	ND	0.050
18-Jan-89 P B B	Lead, ICPES	ND	0.050
18-Jan-89 P B p	Lead, ICPES	ND	0.050
23-Jan-89 P B p	Lead, ICPES	ND	0.050
25-Jan-89 P B p	Lead, ICPES	ND	0.050
04-Apr-89 P B p	Lead, ICPES	ND	0.050
18-Jan-89 P E E	Lead, ICPES	ND	0.050
18-Jan-89 P E p	Lead, ICPES	ND	0.050
20-Mar-89 P E p	Lead, ICPES	ND	0.050
23-Jan-89 P T T	Lead, ICPES	ND	0.050
23-Jan-89 P T p	Lead, ICPES	ND	0.050
27-Jan-89 T p	Lead, ICPES	ND	0.050
06-Feb-89 T A p	Lead, ICPES	ND	0.050
08-Feb-89 T A p	Lead, ICPES	ND	0.050
04-Mar-89 T A p	Lead, ICPES	ND	0.050
04-Mar-89 T A p	Lead, ICPES	ND	0.050
04-Mar-89 T A p	Lead, ICPES	ND	0.050
08-Mar-89 T A p	Lead, ICPES	ND	0.050
10-Feb-89 T B p	Lead, ICPES	ND	0.050
24-Feb-89 T B p	Lead, ICPES	<5X	0.056
27-Feb-89 T B p	Lead, ICPES	ND	0.050
21-Feb-89 T E E	Lead, ICPES	ND	0.050
21-Feb-89 T E p	Lead, ICPES	ND	0.050
08-Feb-89 T T T	Lead, ICPES	ND	0.050
07-Feb-89 T T p	Lead, ICPES	ND	0.050
08-Feb-89 T T p	Lead, ICPES	ND	0.050

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
25-May-89 T T p	Lead, ICPES	ND	0.050
26-May-89 T T p	Lead, ICPES	ND	0.050

Total Number of Blanks = 28
Total Number above Detection Limit = 1

Concentration Range 0.056 - 0.056
Maximum Detection Limit = 0.050

09-Jan-89 P p	Nickel, ICPES	ND	0.020
18-Jan-89 P B B	Nickel, ICPES	ND	0.020
18-Jan-89 P B p	Nickel, ICPES	ND	0.020
23-Jan-89 P B p	Nickel, ICPES	ND	0.020
25-Jan-89 P B p	Nickel, ICPES	ND	0.020
04-Apr-89 P B p	Nickel, ICPES	ND	0.020
18-Jan-89 P E E	Nickel, ICPES	ND	0.020
18-Jan-89 P E p	Nickel, ICPES	ND	0.020
15-Mar-89 P E p	Nickel, ICPES	ND	0.020
29-Mar-89 P E p	Nickel, ICPES	ND	0.020
23-Jan-89 P T T	Nickel, ICPES	ND	0.020
23-Jan-89 P T p	Nickel, ICPES	ND	0.020
27-Jan-89 T p	Nickel, ICPES	ND	0.020
06-Feb-89 T A p	Nickel, ICPES	ND	0.020
08-Feb-89 T A p	Nickel, ICPES	ND	0.020
04-Mar-89 T A p	Nickel, ICPES	ND	0.020
04-Mar-89 T A p	Nickel, ICPES	ND	0.020
04-Mar-89 T A p	Nickel, ICPES	ND	0.020
08-Mar-89 T A p	Nickel, ICPES	ND	0.020
12-Apr-89 T A p	Nickel, ICPES	ND	0.020
10-Feb-89 T B p	Nickel, ICPES	ND	0.020
23-Feb-89 T B p	Nickel, ICPES	ND	0.020
27-Feb-89 T B p	Nickel, ICPES	<5X	0.021
21-Feb-89 T E E	Nickel, ICPES	ND	0.020
21-Feb-89 T E p	Nickel, ICPES	ND	0.020
04-Apr-89 T E p	Nickel, ICPES	ND	0.020
08-Feb-89 T T T	Nickel, ICPES	ND	0.020
07-Feb-89 T T p	Nickel, ICPES	ND	0.020
08-Feb-89 T T p	Nickel, ICPES	ND	0.020

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
15-Mar-89 T T p	Nickel, ICPES	ND	0.020
25-May-89 T T p	Nickel, ICPES	ND	0.020
26-May-89 T T p	Nickel, ICPES	ND	0.020
Total Number of Blanks = 32		Concentration Range	0.021 - 0.021
Total Number above Detection Limit = 1		Maximum Detection Limit = 0.020	
09-Jan-89 P p	Selenium, ICPES	ND	0.30
27-Jan-89 T p	Selenium, ICPES	ND	0.30
Total Number of Blanks = 2		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 0.30	
09-Jan-89 P p	Silver, ICPES	ND	0.030
26-Jan-89 P p	Silver, ICPES	ND	0.030
17-Apr-89 P p	Silver, ICPES	ND	0.030
18-Jan-89 P B B	Silver, ICPES	ND	0.030
18-Jan-89 P B p	Silver, ICPES	ND	0.030
23-Jan-89 P B p	Silver, ICPES	ND	0.030
25-Jan-89 P B p	Silver, ICPES	ND	0.030
04-Apr-89 P B p	Silver, ICPES	ND	0.030
18-Jan-89 P E E	Silver, ICPES	ND	0.030
18-Jan-89 P E p	Silver, ICPES	ND	0.030
15-Mar-89 P E p	Silver, ICPES	ND	0.030
20-Mar-89 P E p	Silver, ICPES	ND	0.030
23-Jan-89 P T T	Silver, ICPES	ND	0.030
23-Jan-89 P T p	Silver, ICPES	ND	0.030
27-Jan-89 T p	Silver, ICPES	ND	0.030
06-Feb-89 T A p	Silver, ICPES	<5X	0.049
08-Feb-89 T A p	Silver, ICPES	<5X	0.033
04-Mar-89 T A p	Silver, ICPES	ND	0.030
04-Mar-89 T A p	Silver, ICPES	ND	0.030
04-Mar-89 T A p	Silver, ICPES	ND	0.030
08-Mar-89 T A p	Silver, ICPES	ND	0.030
12-Apr-89 T A p	Silver, ICPES	ND	0.030

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type Parameter	Detection Flag	Measured Value
Metals, ICPES		
10-Feb-89 T B p Silver, ICPES	ND	0.030
23-Feb-89 T B p Silver, ICPES	ND	0.030
27-Feb-89 T B p Silver, ICPES	ND	0.030
21-Feb-89 T E E Silver, ICPES	ND	0.030
21-Feb-89 T E p Silver, ICPES	ND	0.030
04-Apr-89 T E p Silver, ICPES	ND	0.030
08-Feb-89 T T T Silver, ICPES	ND	0.030
07-Feb-89 T T p Silver, ICPES	ND	0.030
08-Feb-89 T T p Silver, ICPES	<5X	0.033
15-Mar-89 T T p Silver, ICPES	ND	0.030
25-May-89 T T p Silver, ICPES	ND	0.030
26-May-89 T T p Silver, ICPES	ND	0.030

Total Number of Blanks = 34 Concentration Range 0.033 - 0.049
Total Number above Detection Limit = 3 Maximum Detection Limit = 0.030

09-Jan-89 P p Sodium, ICPES	<5X	1.1
18-Jan-89 P B B Sodium, ICPES	ND	1.0
18-Jan-89 P B p Sodium, ICPES	<5X	2.0
23-Jan-89 P B p Sodium, ICPES	<5X	3.0
23-Jan-89 P B p Sodium, ICPES	<5X	3.0
25-Jan-89 P B p Sodium, ICPES	<5X	2.9
04-Apr-89 P B p Sodium, ICPES	<5X	3.2
18-Jan-89 P E E Sodium, ICPES	ND	1.0
18-Jan-89 P E p Sodium, ICPES	<5X	2.0
23-Jan-89 P T T Sodium, ICPES		1100
23-Jan-89 P T p Sodium, ICPES	<5X	3.0
23-Jan-89 P T p Sodium, ICPES	<5X	3.0
27-Jan-89 T p Sodium, ICPES	<5X	1.2
06-Feb-89 T A p Sodium, ICPES	ND	1.0
08-Feb-89 T A p Sodium, ICPES	<5X	2.1
04-Mar-89 T A p Sodium, ICPES	<5X	2.6
04-Mar-89 T A p Sodium, ICPES	<5X	1.5
04-Mar-89 T A p Sodium, ICPES	<5X	2.5
04-Mar-89 T A p Sodium, ICPES	<5X	1.4

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
08-Mar-89 T A p	Sodium, ICPES	<5X	2.9
12-Apr-89 T A p	Sodium, ICPES	<5X	4.7
10-Feb-89 T B p	Sodium, ICPES	<5X	2.1
23-Feb-89 T B p	Sodium, ICPES	ND	1.0
27-Feb-89 T B p	Sodium, ICPES	<5X	1.2
21-Feb-89 T E E	Sodium, ICPES	ND	1.0
21-Feb-89 T E p	Sodium, ICPES	<5X	2.3
04-Apr-89 T E p	Sodium, ICPES	<5X	2.0
08-Feb-89 T T T	Sodium, ICPES	ND	1.0
07-Feb-89 T T p	Sodium, ICPES	<5X	1.6
08-Feb-89 T T p	Sodium, ICPES	<5X	2.1
25-May-89 T T p	Sodium, ICPES	<5X	1.6
26-May-89 T T p	Sodium, ICPES	<5X	1.5
Total Number of Blanks = 32		Concentration Range	1.1 - 1100.0
Total Number above Detection Limit = 26		Maximum Detection Limit = 1.0	
09-Jan-89 P p	Thallium, ICPES	ND	0.10
27-Jan-89 T p	Thallium, ICPES	ND	0.10
Total Number of Blanks = 2		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 0.10	
09-Jan-89 P p	Zinc, ICPES	ND	0.020
18-Jan-89 P B B	Zinc, ICPES	ND	0.020
18-Jan-89 P B p	Zinc, ICPES	ND	0.020
23-Jan-89 P B p	Zinc, ICPES	ND	0.020
25-Jan-89 P B p	Zinc, ICPES	ND	0.020
04-Apr-89 P B p	Zinc, ICPES	ND	0.020
18-Jan-89 P E E	Zinc, ICPES	ND	0.020
18-Jan-89 P E p	Zinc, ICPES	ND	0.020
15-Mar-89 P E p	Zinc, ICPES	ND	0.020
23-Jan-89 P T T	Zinc, ICPES	ND	0.020
23-Jan-89 P T p	Zinc, ICPES	ND	0.020
27-Jan-89 T p	Zinc, ICPES	ND	0.020

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, ICPES			
06-Feb-89 T A p	Zinc, ICPES	ND	0.020
08-Feb-89 T A p	Zinc, ICPES	ND	0.020
04-Mar-89 T A p	Zinc, ICPES	ND	0.020
04-Mar-89 T A p	Zinc, ICPES	ND	0.020
04-Mar-89 T A p	Zinc, ICPES	ND	0.020
08-Mar-89 T A p	Zinc, ICPES	ND	0.020
12-Apr-89 T A p	Zinc, ICPES	ND	0.020
10-Feb-89 T B p	Zinc, ICPES	ND	0.020
23-Feb-89 T B p	Zinc, ICPES	ND	0.020
27-Feb-89 T B p	Zinc, ICPES	ND	0.020
21-Feb-89 T E E	Zinc, ICPES	ND	0.020
21-Feb-89 T E p	Zinc, ICPES	ND	0.020
04-Apr-89 T E p	Zinc, ICPES	<5X	0.021
08-Feb-89 T T T	Zinc, ICPES	ND	0.020
07-Feb-89 T T p	Zinc, ICPES	ND	0.020
08-Feb-89 T T p	Zinc, ICPES	ND	0.020
15-Mar-89 T T p	Zinc, ICPES	ND	0.020
25-May-89 T T p	Zinc, ICPES	ND	0.020
26-May-89 T T p	Zinc, ICPES	ND	0.020

Total Number of Blanks = 31 — Concentration Range 0.021 - 0.021

Total Number above Detection Limit = 1 — Maximum Detection Limit = 0.020

PCBs			
09-Jan-89 P r	PCB-1016	ND	100
23-Jan-89 P B B	PCB-1016	ND	0.021
27-Jan-89 P B r	PCB-1016	ND	0.020
07-Feb-89 P B r	PCB-1016	ND	0.020
23-Jan-89 P E E	PCB-1016	ND	0.022
23-Jan-89 P E r	PCB-1016	ND	0.020
24-Jan-89 P T T	PCB-1016	ND	0.021
24-Jan-89 P T r	PCB-1016	ND	0.020
09-Feb-89 T r	PCB-1016	ND	2.0

Matrix: P = Pretreatment, T = Treated

Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
PCBs			
21-Feb-89 T r	PCB-1016	ND	20.0
11-Feb-89 T A r	PCB-1016	ND	0.020
25-Feb-89 T A r	PCB-1016	ND	0.020
08-Mar-89 T A r	PCB-1016	ND	0.020
25-Feb-89 T B r	PCB-1016	ND	0.020
28-Feb-89 T B r	PCB-1016	ND	0.020
22-Feb-89 T E E	PCB-1016	ND	0.020
07-Apr-89 T E E	PCB-1016	ND	0.11
22-Feb-89 T E r	PCB-1016	ND	0.020
07-Apr-89 T E r	PCB-1016	ND	0.020
22-Feb-89 T T T	PCB-1016	ND	0.10
12-Feb-89 T T r	PCB-1016	ND	0.020
22-Feb-89 T T r	PCB-1016	ND	0.020
Total Number of Blanks = 22		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	PCB-1221	ND	100
23-Jan-89 P B B	PCB-1221	ND	0.021
27-Jan-89 P B r	PCB-1221	ND	0.020
07-Feb-89 P B r	PCB-1221	ND	0.040
23-Jan-89 P E E	PCB-1221	ND	0.022
23-Jan-89 P E r	PCB-1221	ND	0.020
24-Jan-89 P T T	PCB-1221	ND	0.021
24-Jan-89 P T r	PCB-1221	ND	0.020
09-Feb-89 T r	PCB-1221	ND	4.0
21-Feb-89 T r	PCB-1221	ND	40.0
11-Feb-89 T A r	PCB-1221	ND	0.040
25-Feb-89 T A r	PCB-1221	ND	0.040
08-Mar-89 T A r	PCB-1221	ND	0.040
25-Feb-89 T B r	PCB-1221	ND	0.040
28-Feb-89 T B r	PCB-1221	ND	0.040
22-Feb-89 T E E	PCB-1221	ND	0.040
07-Apr-89 T E E	PCB-1221	ND	0.22
22-Feb-89 T E r	PCB-1221	ND	0.040

Matrix: P = Pretreatment, T = Treated

Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
PCBs			
07-Apr-89 T E r	PCB-1221	ND	0.040
22-Feb-89 T T T	PCB-1221	ND	0.20
12-Feb-89 T T r	PCB-1221	ND	0.040
22-Feb-89 T T r	PCB-1221	ND	0.040

Total Number of Blanks = 22 — Concentration Range NC
Total Number above Detection Limit = 0 — Maximum Detection Limit = 100.0

09-Jan-89 P r	PCB-1232	ND	100
23-Jan-89 P B B	PCB-1232	ND	0.042
27-Jan-89 P B r	PCB-1232	ND	0.040
07-Feb-89 P B r	PCB-1232	ND	0.040
23-Jan-89 P E E	PCB-1232	ND	0.044
23-Jan-89 P E r	PCB-1232	ND	0.040
24-Jan-89 P T T	PCB-1232	ND	0.042
24-Jan-89 P T r	PCB-1232	ND	0.040
09-Feb-89 T r	PCB-1232	ND	4.0
21-Feb-89 T r	PCB-1232	ND	40.0
11-Feb-89 T A r	PCB-1232	ND	0.040
25-Feb-89 T A r	PCB-1232	ND	0.040
08-Mar-89 T A r	PCB-1232	ND	0.040
25-Feb-89 T B r	PCB-1232	ND	0.040
28-Feb-89 T B r	PCB-1232	ND	0.040
22-Feb-89 T E E	PCB-1232	ND	0.040
07-Apr-89 T E E	PCB-1232	ND	0.22
22-Feb-89 T E r	PCB-1232	ND	0.040
07-Apr-89 T E r	PCB-1232	ND	0.040
22-Feb-89 T T T	PCB-1232	ND	0.20
12-Feb-89 T T r	PCB-1232	ND	0.040
22-Feb-89 T T r	PCB-1232	ND	0.040

Total Number of Blanks = 22 — Concentration Range NC
Total Number above Detection Limit = 0 — Maximum Detection Limit = 100.0

09-Jan-89 P r	PCB-1242	ND	100

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = AWS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
PCBs			
23-Jan-89 P B B	PCB-1242	ND	0.021
27-Jan-89 P B r	PCB-1242	ND	0.020
07-Feb-89 P B r	PCB-1242	ND	0.020
23-Jan-89 P E E	PCB-1242	ND	0.022
23-Jan-89 P E r	PCB-1242	ND	0.020
24-Jan-89 P T T	PCB-1242	ND	0.021
24-Jan-89 P T r	PCB-1242	ND	0.020
09-Feb-89 T r	PCB-1242	ND	2.0
21-Feb-89 T r	PCB-1242	ND	20.0
11-Feb-89 T A r	PCB-1242	ND	0.020
25-Feb-89 T A r	PCB-1242	ND	0.020
08-Mar-89 T A r	PCB-1242	ND	0.020
25-Feb-89 T B r	PCB-1242	ND	0.020
28-Feb-89 T B r	PCB-1242	ND	0.020
22-Feb-89 T E E	PCB-1242	ND	0.020
07-Apr-89 T E E	PCB-1242	ND	0.11
22-Feb-89 T E r	PCB-1242	ND	0.020
07-Apr-89 T E r	PCB-1242	ND	0.020
22-Feb-89 T T T	PCB-1242	ND	0.10
12-Feb-89 T T r	PCB-1242	ND	0.020
22-Feb-89 T T r	PCB-1242	ND	0.020

Total Number of Blanks = 22 — Concentration Range NC

Total Number above Detection Limit = 0 — Maximum Detection Limit = 100.0

09-Jan-89 P r	PCB-1248	ND	100
23-Jan-89 P B B	PCB-1248	ND	0.021
27-Jan-89 P B r	PCB-1248	ND	0.020
07-Feb-89 P B r	PCB-1248	ND	0.020
23-Jan-89 P E E	PCB-1248	ND	0.022
23-Jan-89 P E r	PCB-1248	ND	0.020
24-Jan-89 P T T	PCB-1248	ND	0.021
24-Jan-89 P T r	PCB-1248	ND	0.020
09-Feb-89 T r	PCB-1248	ND	2.0
21-Feb-89 T r	PCB-1248	ND	20.0

Matrix: P = Pretreatment, T = Treated

Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
PCBs			
11-Feb-89 T A r	PCB-1248	ND	0.020
25-Feb-89 T A r	PCB-1248	ND	0.020
08-Mar-89 T A r	PCB-1248	ND	0.020
25-Feb-89 T B r	PCB-1248	ND	0.020
28-Feb-89 T B r	PCB-1248	ND	0.020
22-Feb-89 T E E	PCB-1248	ND	0.020
07-Apr-89 T E E	PCB-1248	ND	0.020
22-Feb-89 T E r	PCB-1248	ND	0.11
07-Apr-89 T E r	PCB-1248	ND	0.020
22-Feb-89 T T T	PCB-1248	ND	0.020
12-Feb-89 T T r	PCB-1248	ND	0.10
22-Feb-89 T T r	PCB-1248	ND	0.020
		ND	0.020

Total Number of Blanks = 22
Total Number above Detection Limit = 0

Concentration Range NC
Maximum Detection Limit = 100.0

09-Jan-89 P r	PCB-1254	ND	100
23-Jan-89 P B B	PCB-1254	ND	0.042
27-Jan-89 P B r	PCB-1254	ND	0.040
07-Feb-89 P B r	PCB-1254	ND	0.040
23-Jan-89 P E E	PCB-1254	ND	0.044
23-Jan-89 P E r	PCB-1254	ND	0.040
24-Jan-89 P T T	PCB-1254	ND	0.042
24-Jan-89 P T r	PCB-1254	ND	0.040
09-Feb-89 T r	PCB-1254	ND	4.0
21-Feb-89 T r	PCB-1254	ND	40.0
11-Feb-89 T A r	PCB-1254	ND	0.040
25-Feb-89 T A r	PCB-1254	ND	0.040
08-Mar-89 T A r	PCB-1254	ND	0.040
25-Feb-89 T B r	PCB-1254	ND	0.040
28-Feb-89 T B r	PCB-1254	ND	0.040
22-Feb-89 T E E	PCB-1254	ND	0.040
07-Apr-89 T E E	PCB-1254	ND	0.040
22-Feb-89 T E r	PCB-1254	ND	0.22
07-Apr-89 T E r	PCB-1254	ND	0.040
		ND	0.040

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
PCBs			
22-Feb-89 T T T	PCB-1254	ND	0.20
12-Feb-89 T T r	PCB-1254	ND	0.040
22-Feb-89 T T r	PCB-1254	ND	0.040

Total Number of Blanks = 22 Concentration Range NC
Total Number above Detection Limit = 0 Maximum Detection Limit = 100.0

09-Jan-89 P r	PCB-1260	ND	100
23-Jan-89 P B B	PCB-1260	ND	0.042
27-Jan-89 P B r	PCB-1260	ND	0.040
07-Feb-89 P B r	PCB-1260	ND	0.040
23-Jan-89 P E E	PCB-1260	ND	0.044
23-Jan-89 P E r	PCB-1260	ND	0.040
24-Jan-89 P T T	PCB-1260	ND	0.042
24-Jan-89 P T r	PCB-1260	ND	0.040
09-Feb-89 T r	PCB-1260	ND	4.0
21-Feb-89 T r	PCB-1260	ND	40.0
11-Feb-89 T A r	PCB-1260	ND	0.040
25-Feb-89 T A r	PCB-1260	ND	0.040
08-Mar-89 T A r	PCB-1260	ND	0.040
25-Feb-89 T B r	PCB-1260	ND	0.040
28-Feb-89 T B r	PCB-1260	ND	0.040
22-Feb-89 T E E	PCB-1260	ND	0.040
07-Apr-89 T E E	PCB-1260	ND	0.22
07-Apr-89 T E r	PCB-1260	ND	0.040
22-Feb-89 T T T	PCB-1260	ND	0.20
12-Feb-89 T T r	PCB-1260	ND	0.040
22-Feb-89 T T r	PCB-1260	ND	0.040

Total Number of Blanks = 21 Concentration Range NC
Total Number above Detection Limit = 0 Maximum Detection Limit = 100.0

Volatile Organics

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
15-Dec-88 P g	1,1,1-Trichloroethane	ND	2.0
15-Dec-88 P s	1,1,1-Trichloroethane	ND	1.5
16-Jan-89 P T T	1,1,1-Trichloroethane	ND	2.0
16-Jan-89 P T s	1,1,1-Trichloroethane	ND	2.0
24-Jan-89 T r	1,1,1-Trichloroethane	ND	2.0
06-Feb-89 T T T	1,1,1-Trichloroethane	ND	2.0
04-Feb-89 T T s	1,1,1-Trichloroethane	ND	2.0
06-Feb-89 T T s	1,1,1-Trichloroethane	ND	2.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	1,1,2,2-Tetrachloroethane	ND	2.0
15-Dec-88 P s	1,1,2,2-Tetrachloroethane	ND	1.5
16-Jan-89 P T T	1,1,2,2-Tetrachloroethane	ND	2.0
16-Jan-89 P T s	1,1,2,2-Tetrachloroethane	ND	2.0
24-Jan-89 T r	1,1,2,2-Tetrachloroethane	ND	2.0
06-Feb-89 T T T	1,1,2,2-Tetrachloroethane	ND	2.0
04-Feb-89 T T s	1,1,2,2-Tetrachloroethane	ND	2.0
06-Feb-89 T T s	1,1,2,2-Tetrachloroethane	ND	2.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	1,1,2-Trichloroethane	ND	2.0
15-Dec-88 P s	1,1,2-Trichloroethane	ND	1.5
16-Jan-89 P T T	1,1,2-Trichloroethane	ND	2.0
16-Jan-89 P T s	1,1,2-Trichloroethane	ND	2.0
24-Jan-89 T r	1,1,2-Trichloroethane	ND	2.0
06-Feb-89 T T T	1,1,2-Trichloroethane	ND	2.0
04-Feb-89 T T s	1,1,2-Trichloroethane	ND	2.0
06-Feb-89 T T s	1,1,2-Trichloroethane	ND	2.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
16-Jan-89 P T s	Acrylonitrile	ND	25.0
24-Jan-89 T r	Acrylonitrile	ND	25.0
06-Feb-89 T T T	Acrylonitrile	ND	25.0
04-Feb-89 T T s	Acrylonitrile	ND	25.0
06-Feb-89 T T s	Acrylonitrile	ND	25.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 30.0	
15-Dec-88 P g	Benzene	ND	2.0
15-Dec-88 P s	Benzene	ND	1.5
15-Dec-88 P s	Benzene	ND	1.5
16-Jan-89 P T T	Benzene	ND	2.0
16-Jan-89 P T s	Benzene	ND	2.0
24-Jan-89 T r	Benzene	ND	2.0
06-Feb-89 T T T	Benzene	ND	2.0
04-Feb-89 T T s	Benzene	ND	2.0
06-Feb-89 T T s	Benzene	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Bromoform	ND	2.0
15-Dec-88 P s	Bromoform	ND	1.5
15-Dec-88 P s	Bromoform	ND	1.5
16-Jan-89 P T T	Bromoform	ND	2.0
16-Jan-89 P T s	Bromoform	ND	2.0
24-Jan-89 T r	Bromoform	ND	2.0
06-Feb-89 T T T	Bromoform	ND	2.0
04-Feb-89 T T s	Bromoform	ND	2.0
06-Feb-89 T T s	Bromoform	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	1,2-Dichloroethane	ND	2.0
15-Dec-88 P s	1,2-Dichloroethane	ND	1.5
16-Jan-89 P T T	1,2-Dichloroethane	ND	2.0
16-Jan-89 P T s	1,2-Dichloroethane	ND	2.0
24-Jan-89 T r	1,2-Dichloroethane	ND	2.0
06-Feb-89 T T T	1,2-Dichloroethane	ND	2.0
04-Feb-89 T T s	1,2-Dichloroethane	ND	2.0
06-Feb-89 T T s	1,2-Dichloroethane	ND	2.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	1,2-Dichloropropane	ND	2.0
15-Dec-88 P s	1,2-Dichloropropane	ND	1.5
16-Jan-89 P T T	1,2-Dichloropropane	ND	2.0
16-Jan-89 P T s	1,2-Dichloropropane	ND	2.0
24-Jan-89 T r	1,2-Dichloropropane	ND	2.0
06-Feb-89 T T T	1,2-Dichloropropane	ND	2.0
04-Feb-89 T T s	1,2-Dichloropropane	ND	2.0
06-Feb-89 T T s	1,2-Dichloropropane	ND	2.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	2-Butanone	ND	10.0
15-Dec-88 P s	2-Butanone	ND	7.5
16-Jan-89 P T T	2-Butanone	ND	10.0
16-Jan-89 P T s	2-Butanone	ND	10.0
24-Jan-89 T r	2-Butanone	ND	10.0
06-Feb-89 T T T	2-Butanone	ND	10.0
04-Feb-89 T T s	2-Butanone	ND	10.0
06-Feb-89 T T s	2-Butanone	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
06-Feb-89 T T s	4-Methyl-2-pentanone	ND	2.0
Total Number of Blanks = 8		Concentration Range	4.8 - 9.5
Total Number above Detection Limit = 2		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Acetone	ND	25.0
15-Dec-88 P s	Acetone	ND	19.0
15-Dec-88 P s	Acetone	ND	19.0
16-Jan-89 P T T	Acetone		240
16-Jan-89 P T s	Acetone	ND	25.0
24-Jan-89 T r	Acetone	ND	25.0
27-Jan-89 T T T	Acetone	<5X	33.0
04-Feb-89 T T s	Acetone	ND	25.0
06-Feb-89 T T s	Acetone	ND	25.0
Total Number of Blanks = 9		Concentration Range	33.0 - 240.0
Total Number above Detection Limit = 2		Maximum Detection Limit = 25.0	
15-Dec-88 P g	Acrolein	ND	75.0
15-Dec-88 P s	Acrolein	ND	56.0
15-Dec-88 P s	Acrolein	ND	56.0
16-Jan-89 P T T	Acrolein	ND	100
16-Jan-89 P T s	Acrolein	ND	100
24-Jan-89 T r	Acrolein	ND	100
06-Feb-89 T T T	Acrolein	ND	100
04-Feb-89 T T s	Acrolein	ND	100
06-Feb-89 T T s	Acrolein	ND	100
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
15-Dec-88 P g	Acrylonitrile	ND	30.0
15-Dec-88 P s	Acrylonitrile	ND	23.0
15-Dec-88 P s	Acrylonitrile	ND	23.0
16-Jan-89 P T T	Acrylonitrile	ND	25.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
15-Dec-88 P g	2-Chloroethyl vinyl ether	ND	2.0
15-Dec-88 P s	2-Chloroethyl vinyl ether	ND	1.5
15-Dec-88 P s	2-Chloroethyl vinyl ether	ND	1.5
16-Jan-89 P T T	2-Chloroethyl vinyl ether	ND	2.0
16-Jan-89 P T s	2-Chloroethyl vinyl ether	ND	2.0
24-Jan-89 T r	2-Chloroethyl vinyl ether	ND	2.0
06-Feb-89 T T T	2-Chloroethyl vinyl ether	ND	2.0
04-Feb-89 T T s	2-Chloroethyl vinyl ether	ND	2.0
06-Feb-89 T T s	2-Chloroethyl vinyl ether	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	2-Hexanone	ND	10.0
15-Dec-88 P s	2-Hexanone	ND	7.5
16-Jan-89 P T T	2-Hexanone	ND	10.0
16-Jan-89 P T s	2-Hexanone	ND	10.0
24-Jan-89 T r	2-Hexanone	ND	10.0
06-Feb-89 T T T	2-Hexanone	ND	10.0
04-Feb-89 T T s	2-Hexanone	ND	10.0
06-Feb-89 T T s	2-Hexanone	ND	10.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
15-Dec-88 P g	4-Methyl-2-pentanone	ND	2.0
15-Dec-88 P s	4-Methyl-2-pentanone	ND	1.5
13-Jan-89 P T T	4-Methyl-2-pentanone	<5X	9.5
16-Jan-89 P T s	4-Methyl-2-pentanone	ND	2.0
24-Jan-89 T r	4-Methyl-2-pentanone	ND	2.0
27-Jan-89 T T T	4-Methyl-2-pentanone	<5X	4.8
04-Feb-89 T T s	4-Methyl-2-pentanone	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
15-Dec-88 P g	1,1-Dichloroethane	ND	2.0
15-Dec-88 P s	1,1-Dichloroethane	ND	1.5
16-Jan-89 P T T	1,1-Dichloroethane	ND	2.0
16-Jan-89 P T s	1,1-Dichloroethane	ND	2.0
24-Jan-89 T r	1,1-Dichloroethane	ND	2.0
06-Feb-89 T T T	1,1-Dichloroethane	ND	2.0
04-Feb-89 T T s	1,1-Dichloroethane	ND	2.0
06-Feb-89 T T s	1,1-Dichloroethane	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	1,1-Dichloroethene	ND	2.0
15-Dec-88 P s	1,1-Dichloroethene	ND	1.5
16-Jan-89 P T T	1,1-Dichloroethene	ND	2.0
16-Jan-89 P T s	1,1-Dichloroethene	ND	2.0
24-Jan-89 T r	1,1-Dichloroethene	ND	2.0
06-Feb-89 T T T	1,1-Dichloroethene	ND	2.0
04-Feb-89 T T s	1,1-Dichloroethene	ND	2.0
06-Feb-89 T T s	1,1-Dichloroethene	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	1,2,3-Trichloropropane	ND	2.0
15-Dec-88 P s	1,2,3-Trichloropropane	ND	1.5
16-Jan-89 P T T	1,2,3-Trichloropropane	ND	2.0
16-Jan-89 P T s	1,2,3-Trichloropropane	ND	2.0
24-Jan-89 T r	1,2,3-Trichloropropane	ND	2.0
06-Feb-89 T T T	1,2,3-Trichloropropane	ND	2.0
04-Feb-89 T T s	1,2,3-Trichloropropane	ND	2.0
06-Feb-89 T T s	1,2,3-Trichloropropane	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
15-Dec-88 P g	Bromomethane	ND	2.0
15-Dec-88 P s	Bromomethane	ND	1.5
15-Dec-88 P s	Bromomethane	ND	1.5
16-Jan-89 P T T	Bromomethane	ND	2.0
16-Jan-89 P T s	Bromomethane	ND	2.0
24-Jan-89 T r	Bromomethane	ND	2.0
06-Feb-89 T T T	Bromomethane	ND	2.0
04-Feb-89 T T s	Bromomethane	ND	2.0
06-Feb-89 T T s	Bromomethane	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Carbon Disulfide	ND	2.0
15-Dec-88 P s	Carbon Disulfide	ND	1.5
15-Dec-88 P s	Carbon Disulfide	ND	1.5
16-Jan-89 P T T	Carbon Disulfide	ND	2.0
16-Jan-89 P T s	Carbon Disulfide	ND	2.0
24-Jan-89 T r	Carbon Disulfide	ND	2.0
06-Feb-89 T T T	Carbon Disulfide	ND	2.0
04-Feb-89 T T s	Carbon Disulfide	ND	2.0
06-Feb-89 T T s	Carbon Disulfide	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Carbon Tetrachloride	ND	2.0
15-Dec-88 P s	Carbon Tetrachloride	ND	1.5
15-Dec-88 P s	Carbon Tetrachloride	ND	1.5
16-Jan-89 P T T	Carbon Tetrachloride	ND	2.0
16-Jan-89 P T s	Carbon Tetrachloride	ND	2.0
24-Jan-89 T r	Carbon Tetrachloride	ND	2.0
06-Feb-89 T T T	Carbon Tetrachloride	ND	2.0
04-Feb-89 T T s	Carbon Tetrachloride	ND	2.0
06-Feb-89 T T s	Carbon Tetrachloride	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Chlorobenzene	ND	2.0
15-Dec-88 P s	Chlorobenzene	ND	1.5
15-Dec-88 P s	Chlorobenzene	ND	1.5
16-Jan-89 P T T	Chlorobenzene	ND	2.0
16-Jan-89 P T s	Chlorobenzene	ND	2.0
24-Jan-89 T r	Chlorobenzene	ND	2.0
06-Feb-89 T T T	Chlorobenzene	ND	2.0
04-Feb-89 T T s	Chlorobenzene	ND	2.0
06-Feb-89 T T s	Chlorobenzene	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Chlorodibromomethane	ND	2.0
15-Dec-88 P s	Chlorodibromomethane	ND	1.5
15-Dec-88 P s	Chlorodibromomethane	ND	1.5
16-Jan-89 P T T	Chlorodibromomethane	ND	2.0
16-Jan-89 P T s	Chlorodibromomethane	ND	2.0
24-Jan-89 T r	Chlorodibromomethane	ND	2.0
06-Feb-89 T T T	Chlorodibromomethane	ND	2.0
04-Feb-89 T T s	Chlorodibromomethane	ND	2.0
06-Feb-89 T T s	Chlorodibromomethane	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Chloroethane	ND	2.0
15-Dec-88 P s	Chloroethane	ND	1.5
15-Dec-88 P s	Chloroethane	ND	1.5
16-Jan-89 P T T	Chloroethane	ND	2.0
16-Jan-89 P T s	Chloroethane	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
24-Jan-89 T r	Chloroethane		
06-Feb-89 T T T	Chloroethane	ND	2.0
04-Feb-89 T T s	Chloroethane	ND	2.0
06-Feb-89 T T s	Chloroethane	ND	2.0
		ND	2.0
Total Number of Blanks = 9			
Total Number above Detection Limit = 0		Concentration Range	NC
		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Chloroform		
15-Dec-88 P s	Chloroform	ND	2.0
15-Dec-88 P s	Chloroform	ND	1.5
16-Jan-89 P T T	Chloroform	ND	1.5
16-Jan-89 P T s	Chloroform	ND	2.0
24-Jan-89 T r	Chloroform	ND	2.0
06-Feb-89 T T T	Chloroform	ND	2.0
27-Jan-89 T T s	Chloroform	ND	2.0
06-Feb-89 T T s	Chloroform	<5X	2.2
		ND	2.0
Total Number of Blanks = 9			
Total Number above Detection Limit = 1		Concentration Range	2.2 - 2.2
		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Chloromethane		
15-Dec-88 P s	Chloromethane	ND	2.0
15-Dec-88 P s	Chloromethane	ND	1.5
16-Jan-89 P T T	Chloromethane	ND	1.5
16-Jan-89 P T s	Chloromethane	ND	2.0
24-Jan-89 T r	Chloromethane	ND	2.0
06-Feb-89 T T T	Chloromethane	ND	2.0
04-Feb-89 T T s	Chloromethane	ND	2.0
06-Feb-89 T T s	Chloromethane	ND	2.0
		ND	2.0
Total Number of Blanks = 9			
Total Number above Detection Limit = 0		Concentration Range	NC
		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Dibromomethane		
		ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
15-Dec-88 P s	Dibromomethane	ND	1.5
15-Dec-88 P s	Dibromomethane	ND	1.5
16-Jan-89 P T T	Dibromomethane	ND	2.0
16-Jan-89 P T s	Dibromomethane	ND	2.0
24-Jan-89 T r	Dibromomethane	ND	2.0
06-Feb-89 T T T	Dibromomethane	ND	2.0
04-Feb-89 T T s	Dibromomethane	ND	2.0
06-Feb-89 T T s	Dibromomethane	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Dichlorobromomethane	ND	2.0
15-Dec-88 P s	Dichlorobromomethane	ND	1.5
16-Jan-89 P T T	Dichlorobromomethane	ND	2.0
16-Jan-89 P T s	Dichlorobromomethane	ND	2.0
24-Jan-89 T r	Dichlorobromomethane	ND	2.0
06-Feb-89 T T T	Dichlorobromomethane	ND	2.0
04-Feb-89 T T s	Dichlorobromomethane	ND	2.0
06-Feb-89 T T s	Dichlorobromomethane	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Dichlorodifluoromethane	ND	2.0
15-Dec-88 P s	Dichlorodifluoromethane	ND	1.5
15-Dec-88 P s	Dichlorodifluoromethane	ND	1.5
16-Jan-89 P T T	Dichlorodifluoromethane	ND	2.0
16-Jan-89 P T s	Dichlorodifluoromethane	ND	2.0
24-Jan-89 T r	Dichlorodifluoromethane	ND	2.0
06-Feb-89 T T T	Dichlorodifluoromethane	ND	2.0
04-Feb-89 T T s	Dichlorodifluoromethane	ND	2.0
06-Feb-89 T T s	Dichlorodifluoromethane	ND	2.0
Total Number of Blanks = 9		Concentration Range	NC

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Ethyl benzene	ND	2.0
15-Dec-88 P s	Ethyl benzene	ND	1.5
16-Jan-89 P T T	Ethyl benzene	ND	2.0
16-Jan-89 P T s	Ethyl benzene	ND	2.0
24-Jan-89 T r	Ethyl benzene	ND	2.0
06-Feb-89 T T T	Ethyl benzene	ND	2.0
04-Feb-89 T T s	Ethyl benzene	ND	2.0
06-Feb-89 T T s	Ethyl benzene	ND	2.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Ethyl methacrylate	ND	50.0
15-Dec-88 P s	Ethyl methacrylate	ND	38.0
16-Jan-89 P T T	Ethyl methacrylate	ND	50.0
16-Jan-89 P T s	Ethyl methacrylate	ND	50.0
24-Jan-89 T r	Ethyl methacrylate	ND	50.0
06-Feb-89 T T T	Ethyl methacrylate	ND	50.0
04-Feb-89 T T s	Ethyl methacrylate	ND	50.0
06-Feb-89 T T s	Ethyl methacrylate	ND	50.0
Total Number of Blanks = 8		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
15-Dec-88 P g	Iodomethane	ND	2.0
15-Dec-88 P s	Iodomethane	ND	1.5
16-Jan-89 P T T	Iodomethane	ND	2.0
16-Jan-89 P T s	Iodomethane	ND	2.0
24-Jan-89 T r	Iodomethane	ND	2.0
06-Feb-89 T T T	Iodomethane	ND	2.0
04-Feb-89 T T s	Iodomethane	ND	2.0
06-Feb-89 T T s	Iodomethane	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Methylene chloride	ND	10.0
15-Dec-88 P s	Methylene chloride	ND	7.5
13-Jan-89 P T T	Methylene chloride	<5X	11.0
16-Jan-89 P T s	Methylene chloride	ND	10.0
24-Jan-89 T r	Methylene chloride	ND	10.0
06-Feb-89 T T T	Methylene chloride	ND	10.0
04-Feb-89 T T s	Methylene chloride	ND	10.0
06-Feb-89 T T s	Methylene chloride	ND	10.0
Total Number of Blanks = 8		Concentration Range	11.0 - 11.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
15-Dec-88 P g	Styrene	ND	2.0
15-Dec-88 P s	Styrene	ND	1.5
16-Jan-89 P T T	Styrene	ND	2.0
16-Jan-89 P T s	Styrene	ND	2.0
24-Jan-89 T r	Styrene	ND	2.0
06-Feb-89 T T T	Styrene	ND	2.0
04-Feb-89 T T s	Styrene	ND	2.0
06-Feb-89 T T s	Styrene	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Tetrachloroethylene	ND	2.0
15-Dec-88 P s	Tetrachloroethylene	ND	1.5
16-Jan-89 P T T	Tetrachloroethylene	ND	2.0
16-Jan-89 P T s	Tetrachloroethylene	ND	2.0
24-Jan-89 T r	Tetrachloroethylene	ND	2.0
27-Jan-89 T T T	Tetrachloroethylene	<5X	2.3
04-Feb-89 T T s	Tetrachloroethylene	ND	2.0
06-Feb-89 T T s	Tetrachloroethylene	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
Total Number of Blanks = 8		Concentration Range	2.3 - 2.3
Total Number above Detection Limit = 1		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Toluene	ND	2.0
15-Dec-88 P s	Toluene	ND	1.5
16-Jan-89 P T T	Toluene	ND	2.0
16-Jan-89 P T s	Toluene	ND	2.0
24-Jan-89 T r	Toluene	ND	2.0
06-Feb-89 T T T	Toluene	ND	2.0
04-Feb-89 T T s	Toluene	ND	2.0
06-Feb-89 T T s	Toluene	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Trichloroethene	ND	2.0
15-Dec-88 P s	Trichloroethene	ND	1.5
16-Jan-89 P T T	Trichloroethene	ND	2.0
16-Jan-89 P T s	Trichloroethene	ND	2.0
24-Jan-89 T r	Trichloroethene	ND	2.0
06-Feb-89 T T T	Trichloroethene	ND	2.0
04-Feb-89 T T s	Trichloroethene	ND	2.0
06-Feb-89 T T s	Trichloroethene	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Trichlorofluoromethane	ND	10.0
15-Dec-88 P s	Trichlorofluoromethane	ND	7.5
16-Jan-89 P T T	Trichlorofluoromethane	ND	10.0
16-Jan-89 P T s	Trichlorofluoromethane	ND	10.0
24-Jan-89 T r	Trichlorofluoromethane	ND	10.0
06-Feb-89 T T T	Trichlorofluoromethane	ND	10.0
04-Feb-89 T T s	Trichlorofluoromethane	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
06-Feb-89 T T s	Trichlorofluoromethane	ND	10.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
15-Dec-88 P g	Vinyl Acetate	ND	2.0
15-Dec-88 P s	Vinyl Acetate	ND	1.5
16-Jan-89 P T T	Vinyl Acetate	ND	2.0
16-Jan-89 P T s	Vinyl Acetate	ND	2.0
24-Jan-89 T r	Vinyl Acetate	ND	2.0
06-Feb-89 T T T	Vinyl Acetate	ND	2.0
04-Feb-89 T T s	Vinyl Acetate	ND	2.0
06-Feb-89 T T s	Vinyl Acetate	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Vinyl chloride	ND	2.0
15-Dec-88 P s	Vinyl chloride	ND	1.5
16-Jan-89 P T T	Vinyl chloride	ND	2.0
16-Jan-89 P T s	Vinyl chloride	ND	2.0
24-Jan-89 T r	Vinyl chloride	ND	2.0
06-Feb-89 T T T	Vinyl chloride	ND	2.0
04-Feb-89 T T s	Vinyl chloride	ND	2.0
06-Feb-89 T T s	Vinyl chloride	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	Xylenes	ND	2.0
15-Dec-88 P s	Xylenes	ND	1.5
16-Jan-89 P T T	Xylenes	ND	2.0
16-Jan-89 P T s	Xylenes	ND	2.0
24-Jan-89 T r	Xylenes	ND	2.0
06-Feb-89 T T T	Xylenes	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
04-Feb-89 T T s	Xylenes	ND	2.0
06-Feb-89 T T s	Xylenes	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	cis-1,3-Dichloropropene	ND	2.0
15-Dec-88 P s	cis-1,3-Dichloropropene	ND	1.5
16-Jan-89 P T T	cis-1,3-Dichloropropene	ND	2.0
16-Jan-89 P T s	cis-1,3-Dichloropropene	ND	2.0
24-Jan-89 T r	cis-1,3-Dichloropropene	ND	2.0
06-Feb-89 T T T	cis-1,3-Dichloropropene	ND	2.0
04-Feb-89 T T s	cis-1,3-Dichloropropene	ND	2.0
06-Feb-89 T T s	cis-1,3-Dichloropropene	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	trans-1,2-Dichloroethene	ND	2.0
15-Dec-88 P s	trans-1,2-Dichloroethene	ND	1.5
16-Jan-89 P T T	trans-1,2-Dichloroethene	ND	2.0
16-Jan-89 P T s	trans-1,2-Dichloroethene	ND	2.0
24-Jan-89 T r	trans-1,2-Dichloroethene	ND	2.0
06-Feb-89 T T T	trans-1,2-Dichloroethene	ND	2.0
04-Feb-89 T T s	trans-1,2-Dichloroethene	ND	2.0
06-Feb-89 T T s	trans-1,2-Dichloroethene	ND	2.0
Total Number of Blanks = 8		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 2.0	
15-Dec-88 P g	trans-1,3-Dichloropropene	ND	2.0
15-Dec-88 P s	trans-1,3-Dichloropropene	ND	1.5
16-Jan-89 P T T	trans-1,3-Dichloropropene	ND	2.0
16-Jan-89 P T s	trans-1,3-Dichloropropene	ND	2.0
24-Jan-89 T r	trans-1,3-Dichloropropene	ND	2.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Volatile Organics			
06-Feb-89 T T T	trans-1,3-Dichloropropene	ND	2.0
04-Feb-89 T T s	trans-1,3-Dichloropropene	ND	2.0
06-Feb-89 T T s	trans-1,3-Dichloropropene	ND	2.0

Total Number of Blanks = 8 — Concentration Range NC
Total Number above Detection Limit = 0 — Maximum Detection Limit = 2.0

Semivolatile Organics			
09-Jan-89 P r	1,2,4,5-Tetrachlorobenzene	ND	50.0
23-Jan-89 P T T	1,2,4,5-Tetrachlorobenzene	ND	100
23-Jan-89 P T r	1,2,4,5-Tetrachlorobenzene	ND	100
03-Feb-89 T r	1,2,4,5-Tetrachlorobenzene	ND	33.0
08-Feb-89 T T T	1,2,4,5-Tetrachlorobenzene	ND	100
07-Feb-89 T T r	1,2,4,5-Tetrachlorobenzene	ND	100
08-Feb-89 T T r	1,2,4,5-Tetrachlorobenzene	ND	100

Total Number of Blanks = 7 — Concentration Range NC
Total Number above Detection Limit = 0 — Maximum Detection Limit = 100.0

09-Jan-89 P r	1,2,4-Trichlorobenzene	ND	5.0
23-Jan-89 P T T	1,2,4-Trichlorobenzene	ND	10.0
23-Jan-89 P T r	1,2,4-Trichlorobenzene	ND	10.0
03-Feb-89 T r	1,2,4-Trichlorobenzene	ND	3.3
08-Feb-89 T T T	1,2,4-Trichlorobenzene	ND	10.0
07-Feb-89 T T r	1,2,4-Trichlorobenzene	ND	10.0
08-Feb-89 T T r	1,2,4-Trichlorobenzene	ND	10.0

Total Number of Blanks = 7 — Concentration Range NC
Total Number above Detection Limit = 0 — Maximum Detection Limit = 10.0

09-Jan-89 P r	1,2-Dichlorobenzene	ND	5.0
23-Jan-89 P T T	1,2-Dichlorobenzene	ND	10.0
23-Jan-89 P T r	1,2-Dichlorobenzene	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
03-Feb-89 T	r 1,2-Dichlorobenzene	ND	3.3
08-Feb-89 T T T	1,2-Dichlorobenzene	ND	10.0
07-Feb-89 T T r	1,2-Dichlorobenzene	ND	10.0
08-Feb-89 T T r	1,2-Dichlorobenzene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 1,2-Diphenylhydrazine	ND	5.0
23-Jan-89 P T T	1,2-Diphenylhydrazine	ND	10.0
23-Jan-89 P T r	1,2-Diphenylhydrazine	ND	10.0
03-Feb-89 T	r 1,2-Diphenylhydrazine	ND	3.3
08-Feb-89 T T T	1,2-Diphenylhydrazine	ND	10.0
07-Feb-89 T T r	1,2-Diphenylhydrazine	ND	10.0
08-Feb-89 T T r	1,2-Diphenylhydrazine	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 1,3-Dichlorobenzene	ND	5.0
23-Jan-89 P T T	1,3-Dichlorobenzene	ND	10.0
23-Jan-89 P T r	1,3-Dichlorobenzene	ND	10.0
03-Feb-89 T	r 1,3-Dichlorobenzene	ND	3.3
08-Feb-89 T T T	1,3-Dichlorobenzene	ND	10.0
07-Feb-89 T T r	1,3-Dichlorobenzene	ND	10.0
08-Feb-89 T T r	1,3-Dichlorobenzene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 1,3-Dinitrobenzene	ND	50.0
23-Jan-89 P T T	1,3-Dinitrobenzene	ND	100
23-Jan-89 P T r	1,3-Dinitrobenzene	ND	100
03-Feb-89 T	r 1,3-Dinitrobenzene	ND	33.0
08-Feb-89 T T T	1,3-Dinitrobenzene	ND	100

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
07-Feb-89 T T r	1,3-Dinitrobenzene	ND	100
08-Feb-89 T T r	1,3-Dinitrobenzene	ND	100
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	1,4-Dichlorobenzene	ND	5.0
23-Jan-89 P T T	1,4-Dichlorobenzene	ND	10.0
23-Jan-89 P T r	1,4-Dichlorobenzene	ND	10.0
03-Feb-89 T r	1,4-Dichlorobenzene	ND	3.3
08-Feb-89 T T T	1,4-Dichlorobenzene	ND	10.0
07-Feb-89 T T r	1,4-Dichlorobenzene	ND	10.0
08-Feb-89 T T r	1,4-Dichlorobenzene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	1-Chloronaphthalene	ND	5.0
23-Jan-89 P T T	1-Chloronaphthalene	ND	10.0
23-Jan-89 P T r	1-Chloronaphthalene	ND	10.0
03-Feb-89 T r	1-Chloronaphthalene	ND	3.3
08-Feb-89 T T T	1-Chloronaphthalene	ND	10.0
07-Feb-89 T T r	1-Chloronaphthalene	ND	10.0
08-Feb-89 T T r	1-Chloronaphthalene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	1-Naphthylamine	ND	50.0
23-Jan-89 P T T	1-Naphthylamine	ND	100
23-Jan-89 P T r	1-Naphthylamine	ND	100
03-Feb-89 T r	1-Naphthylamine	ND	33.0
08-Feb-89 T T T	1-Naphthylamine	ND	100
07-Feb-89 T T r	1-Naphthylamine	ND	100
08-Feb-89 T T r	1-Naphthylamine	ND	100

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	2,3,4,6-Tetrachlorophenol	ND	50.0
23-Jan-89 P T T	2,3,4,6-Tetrachlorophenol	ND	100
23-Jan-89 P T r	2,3,4,6-Tetrachlorophenol	ND	100
03-Feb-89 T r	2,3,4,6-Tetrachlorophenol	ND	33.0
08-Feb-89 T T T	2,3,4,6-Tetrachlorophenol	ND	100
07-Feb-89 T T r	2,3,4,6-Tetrachlorophenol	ND	100
08-Feb-89 T T r	2,3,4,6-Tetrachlorophenol	ND	100
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	2,4,5-Trichlorophenol	ND	25.0
23-Jan-89 P T T	2,4,5-Trichlorophenol	ND	50.0
23-Jan-89 P T r	2,4,5-Trichlorophenol	ND	50.0
03-Feb-89 T r	2,4,5-Trichlorophenol	ND	17.0
08-Feb-89 T T T	2,4,5-Trichlorophenol	ND	50.0
07-Feb-89 T T r	2,4,5-Trichlorophenol	ND	50.0
08-Feb-89 T T r	2,4,5-Trichlorophenol	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	2,4,6-Trichlorophenol	ND	25.0
23-Jan-89 P T T	2,4,6-Trichlorophenol	ND	50.0
23-Jan-89 P T r	2,4,6-Trichlorophenol	ND	50.0
03-Feb-89 T r	2,4,6-Trichlorophenol	ND	17.0
08-Feb-89 T T T	2,4,6-Trichlorophenol	ND	50.0
07-Feb-89 T T r	2,4,6-Trichlorophenol	ND	50.0
08-Feb-89 T T r	2,4,6-Trichlorophenol	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = AWS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P	r 2,4-Dichlorophenol	ND	5.0
23-Jan-89 P T T	2,4-Dichlorophenol	ND	10.0
23-Jan-89 P T r	2,4-Dichlorophenol	ND	10.0
03-Feb-89 T	r 2,4-Dichlorophenol	ND	3.3
08-Feb-89 T T T	2,4-Dichlorophenol	ND	10.0
07-Feb-89 T T r	2,4-Dichlorophenol	ND	10.0
08-Feb-89 T T r	2,4-Dichlorophenol	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 2,4-Dimethylphenol	ND	5.0
23-Jan-89 P T T	2,4-Dimethylphenol	ND	10.0
23-Jan-89 P T r	2,4-Dimethylphenol	ND	10.0
03-Feb-89 T	r 2,4-Dimethylphenol	ND	3.3
08-Feb-89 T T T	2,4-Dimethylphenol	ND	10.0
07-Feb-89 T T r	2,4-Dimethylphenol	ND	10.0
08-Feb-89 T T r	2,4-Dimethylphenol	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 2,4-Dinitrophenol	ND	25.0
23-Jan-89 P T T	2,4-Dinitrophenol	ND	50.0
23-Jan-89 P T r	2,4-Dinitrophenol	ND	50.0
03-Feb-89 T	r 2,4-Dinitrophenol	ND	17.0
08-Feb-89 T T T	2,4-Dinitrophenol	ND	50.0
07-Feb-89 T T r	2,4-Dinitrophenol	ND	50.0
08-Feb-89 T T r	2,4-Dinitrophenol	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
09-Jan-89 P	r 2,4-Dinitrotoluene	ND	5.0
23-Jan-89 P T T	2,4-Dinitrotoluene	ND	10.0
23-Jan-89 P T r	2,4-Dinitrotoluene	ND	10.0
03-Feb-89 T	r 2,4-Dinitrotoluene	ND	3.3
08-Feb-89 T T T	2,4-Dinitrotoluene	ND	10.0
07-Feb-89 T T r	2,4-Dinitrotoluene	ND	10.0
08-Feb-89 T T r	2,4-Dinitrotoluene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 2,6-Dichlorophenol	ND	5.0
23-Jan-89 P T T	2,6-Dichlorophenol	ND	10.0
23-Jan-89 P T r	2,6-Dichlorophenol	ND	10.0
03-Feb-89 T	r 2,6-Dichlorophenol	ND	3.3
08-Feb-89 T T T	2,6-Dichlorophenol	ND	10.0
07-Feb-89 T T r	2,6-Dichlorophenol	ND	10.0
08-Feb-89 T T r	2,6-Dichlorophenol	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 2,6-Dinitrotoluene	ND	5.0
23-Jan-89 P T T	2,6-Dinitrotoluene	ND	10.0
23-Jan-89 P T r	2,6-Dinitrotoluene	ND	10.0
03-Feb-89 T	r 2,6-Dinitrotoluene	ND	3.3
08-Feb-89 T T T	2,6-Dinitrotoluene	ND	10.0
07-Feb-89 T T r	2,6-Dinitrotoluene	ND	10.0
08-Feb-89 T T r	2,6-Dinitrotoluene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 2-Chloronaphthalene	ND	5.0
23-Jan-89 P T T	2-Chloronaphthalene	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
23-Jan-89 P T r	2-Chloronaphthalene	ND	10.0
03-Feb-89 T r	2-Chloronaphthalene	ND	3.3
08-Feb-89 T T T	2-Chloronaphthalene	ND	10.0
07-Feb-89 T T r	2-Chloronaphthalene	ND	10.0
08-Feb-89 T T r	2-Chloronaphthalene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	2-Chlorophenol	ND	5.0
23-Jan-89 P T T	2-Chlorophenol	ND	10.0
23-Jan-89 P T r	2-Chlorophenol	ND	10.0
03-Feb-89 T r	2-Chlorophenol	ND	3.3
08-Feb-89 T T T	2-Chlorophenol	ND	10.0
07-Feb-89 T T r	2-Chlorophenol	ND	10.0
08-Feb-89 T T r	2-Chlorophenol	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	2-Methylnaphthalene		150
23-Jan-89 P T T	2-Methylnaphthalene	ND	10.0
23-Jan-89 P T r	2-Methylnaphthalene	ND	10.0
03-Feb-89 T r	2-Methylnaphthalene	ND	3.3
08-Feb-89 T T T	2-Methylnaphthalene	ND	10.0
07-Feb-89 T T r	2-Methylnaphthalene	ND	10.0
08-Feb-89 T T r	2-Methylnaphthalene	ND	10.0
Total Number of Blanks = 7		Concentration Range	150 - 150.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	2-Naphthylamine	ND	50.0
23-Jan-89 P T T	2-Naphthylamine	ND	100
23-Jan-89 P T r	2-Naphthylamine	ND	100
03-Feb-89 T r	2-Naphthylamine	ND	33.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
08-Feb-89 T T T	2-Naphthylamine	ND	100
07-Feb-89 T T r	2-Naphthylamine	ND	100
08-Feb-89 T T r	2-Naphthylamine	ND	100
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	2-Nitroaniline	ND	25.0
23-Jan-89 P T T	2-Nitroaniline	ND	50.0
23-Jan-89 P T r	2-Nitroaniline	ND	50.0
03-Feb-89 T r	2-Nitroaniline	ND	17.0
08-Feb-89 T T T	2-Nitroaniline	ND	50.0
07-Feb-89 T T r	2-Nitroaniline	ND	50.0
08-Feb-89 T T r	2-Nitroaniline	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	2-Nitrophenol	ND	25.0
23-Jan-89 P T T	2-Nitrophenol	ND	50.0
23-Jan-89 P T r	2-Nitrophenol	ND	50.0
03-Feb-89 T r	2-Nitrophenol	ND	17.0
08-Feb-89 T T T	2-Nitrophenol	ND	50.0
07-Feb-89 T T r	2-Nitrophenol	ND	50.0
08-Feb-89 T T r	2-Nitrophenol	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	2-Picoline	ND	25.0
23-Jan-89 P T T	2-Picoline	ND	50.0
23-Jan-89 P T r	2-Picoline	ND	50.0
03-Feb-89 T r	2-Picoline	ND	17.0
08-Feb-89 T T T	2-Picoline	ND	50.0
07-Feb-89 T T r	2-Picoline	ND	50.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
08-Feb-89 T T r	2-Picoline	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	3,3'-Dichlorobenzidene	ND	10.0
23-Jan-89 P T T	3,3'-Dichlorobenzidene	ND	20.0
23-Jan-89 P T r	3,3'-Dichlorobenzidene	ND	20.0
03-Feb-89 T r	3,3'-Dichlorobenzidene	ND	6.6
08-Feb-89 T T T	3,3'-Dichlorobenzidene	ND	20.0
07-Feb-89 T T r	3,3'-Dichlorobenzidene	ND	20.0
08-Feb-89 T T r	3,3'-Dichlorobenzidene	ND	20.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 20.0	
09-Jan-89 P r	3-Methylcholanthrene	ND	10.0
23-Jan-89 P T T	3-Methylcholanthrene	ND	20.0
23-Jan-89 P T r	3-Methylcholanthrene	ND	20.0
03-Feb-89 T r	3-Methylcholanthrene	ND	6.6
08-Feb-89 T T T	3-Methylcholanthrene	ND	20.0
07-Feb-89 T T r	3-Methylcholanthrene	ND	20.0
08-Feb-89 T T r	3-Methylcholanthrene	ND	20.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 20.0	
09-Jan-89 P r	3-Nitroaniline	ND	25.0
23-Jan-89 P T T	3-Nitroaniline	ND	50.0
23-Jan-89 P T r	3-Nitroaniline	ND	50.0
03-Feb-89 T r	3-Nitroaniline	ND	17.0
08-Feb-89 T T T	3-Nitroaniline	ND	50.0
07-Feb-89 T T r	3-Nitroaniline	ND	50.0
08-Feb-89 T T r	3-Nitroaniline	ND	50.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	4,6-Dinitro-2-Methylphenol	ND	25.0
23-Jan-89 P T T	4,6-Dinitro-2-Methylphenol	ND	50.0
23-Jan-89 P T r	4,6-Dinitro-2-Methylphenol	ND	50.0
03-Feb-89 T r	4,6-Dinitro-2-Methylphenol	ND	17.0
08-Feb-89 T T T	4,6-Dinitro-2-Methylphenol	ND	50.0
07-Feb-89 T T r	4,6-Dinitro-2-Methylphenol	ND	50.0
08-Feb-89 T T r	4,6-Dinitro-2-Methylphenol	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	4-Aminobiphenyl	ND	130
23-Jan-89 P T T	4-Aminobiphenyl	ND	250
23-Jan-89 P T r	4-Aminobiphenyl	ND	250
03-Feb-89 T r	4-Aminobiphenyl	ND	83.0
08-Feb-89 T T T	4-Aminobiphenyl	ND	250
07-Feb-89 T T r	4-Aminobiphenyl	ND	250
08-Feb-89 T T r	4-Aminobiphenyl	ND	250
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 250.0	
09-Jan-89 P r	4-Bromophenyl phenyl ether	ND	5.0
23-Jan-89 P T T	4-Bromophenyl phenyl ether	ND	10.0
23-Jan-89 P T r	4-Bromophenyl phenyl ether	ND	10.0
03-Feb-89 T r	4-Bromophenyl phenyl ether	ND	3.3
08-Feb-89 T T T	4-Bromophenyl phenyl ether	ND	10.0
07-Feb-89 T T r	4-Bromophenyl phenyl ether	ND	10.0
08-Feb-89 T T r	4-Bromophenyl phenyl ether	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
09-Jan-89 P	r 4-Chloro-3-methylphenol	ND	5.0
23-Jan-89 P T T	4-Chloro-3-methylphenol	ND	10.0
23-Jan-89 P T r	4-Chloro-3-methylphenol	ND	10.0
03-Feb-89 T	r 4-Chloro-3-methylphenol	ND	3.3
08-Feb-89 T T T	4-Chloro-3-methylphenol	ND	10.0
07-Feb-89 T T r	4-Chloro-3-methylphenol	ND	10.0
08-Feb-89 T T r	4-Chloro-3-methylphenol	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 4-Chlorophenyl phenyl ether	ND	5.0
23-Jan-89 P T T	4-Chlorophenyl phenyl ether	ND	10.0
23-Jan-89 P T r	4-Chlorophenyl phenyl ether	ND	10.0
03-Feb-89 T	r 4-Chlorophenyl phenyl ether	ND	3.3
08-Feb-89 T T T	4-Chlorophenyl phenyl ether	ND	10.0
07-Feb-89 T T r	4-Chlorophenyl phenyl ether	ND	10.0
08-Feb-89 T T r	4-Chlorophenyl phenyl ether	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P	r 4-Nitroaniline	ND	25.0
23-Jan-89 P T T	4-Nitroaniline	ND	50.0
23-Jan-89 P T r	4-Nitroaniline	ND	50.0
03-Feb-89 T	r 4-Nitroaniline	ND	17.0
08-Feb-89 T T T	4-Nitroaniline	ND	50.0
07-Feb-89 T T r	4-Nitroaniline	ND	50.0
08-Feb-89 T T r	4-Nitroaniline	ND	50.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P	r 4-Nitrophenol	ND	25.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
23-Jan-89 P T T	4-Nitrophenol	ND	50.0
23-Jan-89 P T r	4-Nitrophenol	ND	50.0
03-Feb-89 T r	4-Nitrophenol	ND	17.0
08-Feb-89 T T T	4-Nitrophenol	ND	50.0
07-Feb-89 T T r	4-Nitrophenol	ND	50.0
08-Feb-89 T T r	4-Nitrophenol	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	5-Nitro-o-toluidine	ND	25.0
23-Jan-89 P T T	5-Nitro-o-toluidine	ND	50.0
23-Jan-89 P T r	5-Nitro-o-toluidine	ND	50.0
03-Feb-89 T r	5-Nitro-o-toluidine	ND	17.0
08-Feb-89 T T T	5-Nitro-o-toluidine	ND	50.0
07-Feb-89 T T r	5-Nitro-o-toluidine	ND	50.0
08-Feb-89 T T r	5-Nitro-o-toluidine	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	7,12-Dimethylbenz(a)anthracene	ND	10.0
23-Jan-89 P T T	7,12-Dimethylbenz(a)anthracene	ND	20.0
23-Jan-89 P T r	7,12-Dimethylbenz(a)anthracene	ND	20.0
03-Feb-89 T r	7,12-Dimethylbenz(a)anthracene	ND	6.6
08-Feb-89 T T T	7,12-Dimethylbenz(a)anthracene	ND	20.0
07-Feb-89 T T r	7,12-Dimethylbenz(a)anthracene	ND	20.0
08-Feb-89 T T r	7,12-Dimethylbenz(a)anthracene	ND	20.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 20.0	
23-Jan-89 P T T	Acenaphthene	ND	10.0
23-Jan-89 P T r	Acenaphthene	ND	10.0
07-Dec-88 T f	Acenaphthene	<5X	15.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type Parameter	Detection Flag	Measured Value
Semivolatile Organics		
03-Feb-89 T r Acenaphthene	ND	3.3
08-Feb-89 T T T Acenaphthene	ND	10.0
07-Feb-89 T T r Acenaphthene	ND	10.0
08-Feb-89 T T r Acenaphthene	ND	10.0
Total Number of Blanks = 7	Concentration Range	15.0 - 15.0
Total Number above Detection Limit = 1	Maximum Detection Limit = 10.0	
09-Jan-89 P r Acenaphthylene	ND	5.0
23-Jan-89 P T T Acenaphthylene	ND	10.0
23-Jan-89 P T r Acenaphthylene	ND	10.0
03-Feb-89 T r Acenaphthylene	ND	3.3
08-Feb-89 T T T Acenaphthylene	ND	10.0
07-Feb-89 T T r Acenaphthylene	ND	10.0
08-Feb-89 T T r Acenaphthylene	ND	10.0
Total Number of Blanks = 7	Concentration Range	NC
Total Number above Detection Limit = 0	Maximum Detection Limit = 10.0	
09-Jan-89 P r Acetophenone	ND	5.0
23-Jan-89 P T T Acetophenone	ND	10.0
23-Jan-89 P T r Acetophenone	ND	10.0
03-Feb-89 T r Acetophenone	ND	3.3
08-Feb-89 T T T Acetophenone	ND	10.0
07-Feb-89 T T r Acetophenone	ND	10.0
08-Feb-89 T T r Acetophenone	ND	10.0
Total Number of Blanks = 7	Concentration Range	NC
Total Number above Detection Limit = 0	Maximum Detection Limit = 10.0	
09-Jan-89 P r Aniline	ND	10.0
23-Jan-89 P T T Aniline	ND	20.0
23-Jan-89 P T r Aniline	ND	20.0
03-Feb-89 T r Aniline	ND	6.6
08-Feb-89 T T T Aniline	ND	20.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
07-Feb-89 T T r	Aniline	ND	20.0
08-Feb-89 T T r	Aniline	ND	20.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 20.0	
09-Jan-89 P r	Anthracene		30.0
23-Jan-89 P T T	Anthracene	ND	10.0
23-Jan-89 P T r	Anthracene	ND	10.0
03-Feb-89 T r	Anthracene	ND	3.3
08-Feb-89 T T T	Anthracene	ND	10.0
07-Feb-89 T T r	Anthracene	ND	10.0
08-Feb-89 T T r	Anthracene	ND	10.0
Total Number of Blanks = 7		Concentration Range	30.0 - 30.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzidine	ND	5.0
23-Jan-89 P T T	Benzidine	ND	10.0
23-Jan-89 P T r	Benzidine	ND	10.0
03-Feb-89 T r	Benzidine	ND	3.3
08-Feb-89 T T T	Benzidine	ND	10.0
07-Feb-89 T T r	Benzidine	ND	10.0
08-Feb-89 T T r	Benzidine	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzo(a)anthracene	ND	5.0
23-Jan-89 P T T	Benzo(a)anthracene	ND	10.0
23-Jan-89 P T r	Benzo(a)anthracene	ND	10.0
03-Feb-89 T r	Benzo(a)anthracene	ND	3.3
08-Feb-89 T T T	Benzo(a)anthracene	ND	10.0
07-Feb-89 T T r	Benzo(a)anthracene	ND	10.0
08-Feb-89 T T r	Benzo(a)anthracene	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzo(a)pyrene	ND	5.0
23-Jan-89 P T T	Benzo(a)pyrene	ND	10.0
23-Jan-89 P T r	Benzo(a)pyrene	ND	10.0
03-Feb-89 T r	Benzo(a)pyrene	ND	3.3
08-Feb-89 T T T	Benzo(a)pyrene	ND	10.0
07-Feb-89 T T r	Benzo(a)pyrene	ND	10.0
08-Feb-89 T T r	Benzo(a)pyrene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzo(b)fluoranthene	ND	5.0
23-Jan-89 P T T	Benzo(b)fluoranthene	ND	10.0
23-Jan-89 P T r	Benzo(b)fluoranthene	ND	10.0
03-Feb-89 T r	Benzo(b)fluoranthene	ND	3.3
08-Feb-89 T T T	Benzo(b)fluoranthene	ND	10.0
07-Feb-89 T T r	Benzo(b)fluoranthene	ND	10.0
08-Feb-89 T T r	Benzo(b)fluoranthene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzo(g,h,i)perylene	ND	5.0
23-Jan-89 P T T	Benzo(g,h,i)perylene	ND	10.0
23-Jan-89 P T r	Benzo(g,h,i)perylene	ND	10.0
03-Feb-89 T r	Benzo(g,h,i)perylene	ND	3.3
08-Feb-89 T T T	Benzo(g,h,i)perylene	ND	10.0
07-Feb-89 T T r	Benzo(g,h,i)perylene	ND	10.0
08-Feb-89 T T r	Benzo(g,h,i)perylene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzo(k)fluoranthene	ND	5.0
23-Jan-89 P T T	Benzo(k)fluoranthene	ND	10.0
23-Jan-89 P T r	Benzo(k)fluoranthene	ND	10.0
03-Feb-89 T r	Benzo(k)fluoranthene	ND	3.3
08-Feb-89 T T T	Benzo(k)fluoranthene	ND	10.0
07-Feb-89 T T r	Benzo(k)fluoranthene	ND	10.0
08-Feb-89 T T r	Benzo(k)fluoranthene	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzoic acid	ND	5.0
23-Jan-89 P T T	Benzoic acid	ND	10.0
23-Jan-89 P T r	Benzoic acid	ND	10.0
03-Feb-89 T r	Benzoic acid	ND	3.3
08-Feb-89 T T T	Benzoic acid	ND	10.0
07-Feb-89 T T r	Benzoic acid	ND	10.0
08-Feb-89 T T r	Benzoic acid	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Benzyl alcohol	ND	5.0
23-Jan-89 P T T	Benzyl alcohol	ND	10.0
23-Jan-89 P T r	Benzyl alcohol	ND	10.0
03-Feb-89 T r	Benzyl alcohol	ND	3.3
08-Feb-89 T T T	Benzyl alcohol	ND	10.0
07-Feb-89 T T r	Benzyl alcohol	ND	10.0
08-Feb-89 T T r	Benzyl alcohol	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
09-Jan-89 P r	Butyl benzyl phthalate	ND	5.0
23-Jan-89 P T T	Butyl benzyl phthalate	ND	10.0
23-Jan-89 P T r	Butyl benzyl phthalate	ND	10.0
03-Feb-89 T r	Butyl benzyl phthalate	ND	3.3
08-Feb-89 T T T	Butyl benzyl phthalate	ND	10.0
07-Feb-89 T T r	Butyl benzyl phthalate	ND	10.0
08-Feb-89 T T r	Butyl benzyl phthalate	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Chlorobenzilate	ND	5.0
23-Jan-89 P T T	Chlorobenzilate	ND	10.0
23-Jan-89 P T r	Chlorobenzilate	ND	10.0
03-Feb-89 T r	Chlorobenzilate	ND	3.3
08-Feb-89 T T T	Chlorobenzilate	ND	10.0
07-Feb-89 T T r	Chlorobenzilate	ND	10.0
08-Feb-89 T T r	Chlorobenzilate	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Chrysene	ND	10.0
23-Jan-89 P T r	Chrysene	ND	10.0
07-Dec-88 T f	Chrysene	<5X	5.0
03-Feb-89 T r	Chrysene	ND	3.3
08-Feb-89 T T T	Chrysene	ND	10.0
07-Feb-89 T T r	Chrysene	ND	10.0
08-Feb-89 T T r	Chrysene	ND	10.0
Total Number of Blanks = 7		Concentration Range 5.0 - 5.0	
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Di-n-butylphthalate	ND	10.0
23-Jan-89 P T r	Di-n-butylphthalate	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
07-Dec-88 T f	Di-n-butylphthalate	<5X	9.5
03-Feb-89 T r	Di-n-butylphthalate	ND	3.3
08-Feb-89 T T T	Di-n-butylphthalate	ND	10.0
07-Feb-89 T T r	Di-n-butylphthalate	ND	10.0
08-Feb-89 T T r	Di-n-butylphthalate	ND	10.0
Total Number of Blanks = 7		Concentration Range	9.5 - 9.5
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Di-n-octylphthalate	ND	5.0
23-Jan-89 P T T	Di-n-octylphthalate	ND	10.0
23-Jan-89 P T r	Di-n-octylphthalate	ND	10.0
03-Feb-89 T r	Di-n-octylphthalate	ND	3.3
08-Feb-89 T T T	Di-n-octylphthalate	ND	10.0
07-Feb-89 T T r	Di-n-octylphthalate	ND	10.0
08-Feb-89 T T r	Di-n-octylphthalate	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Dibenz(a,j)acridine	ND	5.0
23-Jan-89 P T T	Dibenz(a,j)acridine	ND	10.0
23-Jan-89 P T r	Dibenz(a,j)acridine	ND	10.0
03-Feb-89 T r	Dibenz(a,j)acridine	ND	3.3
08-Feb-89 T T T	Dibenz(a,j)acridine	ND	10.0
07-Feb-89 T T r	Dibenz(a,j)acridine	ND	10.0
08-Feb-89 T T r	Dibenz(a,j)acridine	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Dibenzo(a,h)anthracene	ND	5.0
23-Jan-89 P T T	Dibenzo(a,h)anthracene	ND	10.0
23-Jan-89 P T r	Dibenzo(a,h)anthracene	ND	10.0
03-Feb-89 T r	Dibenzo(a,h)anthracene	ND	3.3

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
08-Feb-89 T T T	Dibenzo(a,h)anthracene	ND	10.0
07-Feb-89 T T r	Dibenzo(a,h)anthracene	ND	10.0
08-Feb-89 T T r	Dibenzo(a,h)anthracene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Dibenzofuran	ND	10.0
23-Jan-89 P T r	Dibenzofuran	ND	10.0
07-Dec-88 T f	Dibenzofuran	<5X	9.5
03-Feb-89 T r	Dibenzofuran	ND	3.3
08-Feb-89 T T T	Dibenzofuran	ND	10.0
07-Feb-89 T T r	Dibenzofuran	ND	10.0
08-Feb-89 T T r	Dibenzofuran	ND	10.0
Total Number of Blanks = 7		Concentration Range	9.5 - 9.5
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Diethylphthalate	ND	5.0
23-Jan-89 P T T	Diethylphthalate	ND	10.0
23-Jan-89 P T r	Diethylphthalate	ND	10.0
03-Feb-89 T r	Diethylphthalate	ND	3.3
08-Feb-89 T T T	Diethylphthalate	ND	10.0
07-Feb-89 T T r	Diethylphthalate	ND	10.0
08-Feb-89 T T r	Diethylphthalate	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Dimethylphthalate	ND	5.0
23-Jan-89 P T T	Dimethylphthalate	ND	10.0
23-Jan-89 P T r	Dimethylphthalate	ND	10.0
03-Feb-89 T r	Dimethylphthalate	ND	3.3
08-Feb-89 T T T	Dimethylphthalate	ND	10.0
07-Feb-89 T T r	Dimethylphthalate	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = AWS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
08-Feb-89 T T r	Dimethylphthalate	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Diphenylamine	ND	5.0
23-Jan-89 P T T	Diphenylamine	ND	10.0
23-Jan-89 P T r	Diphenylamine	ND	10.0
03-Feb-89 T r	Diphenylamine	ND	3.3
08-Feb-89 T T T	Diphenylamine	ND	10.0
07-Feb-89 T T r	Diphenylamine	ND	10.0
08-Feb-89 T T r	Diphenylamine	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Ethyl methanesulfonate	ND	5.0
23-Jan-89 P T T	Ethyl methanesulfonate	ND	10.0
23-Jan-89 P T r	Ethyl methanesulfonate	ND	10.0
03-Feb-89 T r	Ethyl methanesulfonate	ND	3.3
08-Feb-89 T T T	Ethyl methanesulfonate	ND	10.0
07-Feb-89 T T r	Ethyl methanesulfonate	ND	10.0
08-Feb-89 T T r	Ethyl methanesulfonate	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Fluoranthene	ND	10.0
23-Jan-89 P T r	Fluoranthene	ND	10.0
07-Dec-88 T f	Fluoranthene	<5X	12.0
03-Feb-89 T r	Fluoranthene	ND	3.3
08-Feb-89 T T T	Fluoranthene	ND	10.0
07-Feb-89 T T r	Fluoranthene	ND	10.0
08-Feb-89 T T r	Fluoranthene	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = RET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number of Blanks = 7		Concentration Range	12.0 - 12.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Fluorene	ND	10.0
23-Jan-89 P T r	Fluorene	ND	10.0
07-Dec-88 T f	Fluorene	<5X	15.0
03-Feb-89 T r	Fluorene	ND	3.3
08-Feb-89 T T T	Fluorene	ND	10.0
07-Feb-89 T T r	Fluorene	ND	10.0
08-Feb-89 T T r	Fluorene	ND	10.0
Total Number of Blanks = 7		Concentration Range	15.0 - 15.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Hexachlorobenzene		370
23-Jan-89 P T T	Hexachlorobenzene	ND	10.0
23-Jan-89 P T r	Hexachlorobenzene	ND	10.0
03-Feb-89 T r	Hexachlorobenzene	ND	3.3
08-Feb-89 T T T	Hexachlorobenzene	ND	10.0
07-Feb-89 T T r	Hexachlorobenzene	ND	10.0
08-Feb-89 T T r	Hexachlorobenzene	ND	10.0
Total Number of Blanks = 7		Concentration Range	370 - 370.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Hexachlorobutadiene	ND	10.0
23-Jan-89 P T r	Hexachlorobutadiene	ND	10.0
07-Dec-88 T f	Hexachlorobutadiene	<5X	11.0
03-Feb-89 T r	Hexachlorobutadiene	ND	3.3
08-Feb-89 T T T	Hexachlorobutadiene	ND	10.0
07-Feb-89 T T r	Hexachlorobutadiene	ND	10.0
08-Feb-89 T T r	Hexachlorobutadiene	ND	10.0
Total Number of Blanks = 7		Concentration Range	11.0 - 11.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
09-Jan-89 P r	Hexachlorocyclopentadiene	ND	5.0
23-Jan-89 P T T	Hexachlorocyclopentadiene	ND	10.0
23-Jan-89 P T r	Hexachlorocyclopentadiene	ND	10.0
03-Feb-89 T r	Hexachlorocyclopentadiene	ND	3.3
08-Feb-89 T T T	Hexachlorocyclopentadiene	ND	10.0
07-Feb-89 T T r	Hexachlorocyclopentadiene	ND	10.0
08-Feb-89 T T r	Hexachlorocyclopentadiene	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Hexachloroethane	ND	5.0
23-Jan-89 P T T	Hexachloroethane	ND	10.0
23-Jan-89 P T r	Hexachloroethane	ND	10.0
03-Feb-89 T r	Hexachloroethane	ND	3.3
08-Feb-89 T T T	Hexachloroethane	ND	10.0
07-Feb-89 T T r	Hexachloroethane	ND	10.0
08-Feb-89 T T r	Hexachloroethane	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Indeno(1,2,3-c,d)pyrene	ND	5.0
23-Jan-89 P T T	Indeno(1,2,3-c,d)pyrene	ND	10.0
23-Jan-89 P T r	Indeno(1,2,3-c,d)pyrene	ND	10.0
03-Feb-89 T r	Indeno(1,2,3-c,d)pyrene	ND	3.3
08-Feb-89 T T T	Indeno(1,2,3-c,d)pyrene	ND	10.0
07-Feb-89 T T r	Indeno(1,2,3-c,d)pyrene	ND	10.0
08-Feb-89 T T r	Indeno(1,2,3-c,d)pyrene	ND	10.0
Total Number of Blanks = 7		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	Isophorone	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
23-Jan-89 P T r	Isophorone	ND	10.0
07-Dec-88 T f	Isophorone	<5X	7.5
03-Feb-89 T r	Isophorone	ND	3.3
08-Feb-89 T T T	Isophorone	ND	10.0
07-Feb-89 T T r	Isophorone	ND	10.0
08-Feb-89 T T r	Isophorone	ND	10.0
Total Number of Blanks = 7		Concentration Range	7.5 - 7.5
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Methyl methanesulfonate	ND	10.0
23-Jan-89 P T T	Methyl methanesulfonate	ND	20.0
23-Jan-89 P T r	Methyl methanesulfonate	ND	20.0
03-Feb-89 T r	Methyl methanesulfonate	ND	6.6
08-Feb-89 T T T	Methyl methanesulfonate	ND	20.0
07-Feb-89 T T r	Methyl methanesulfonate	ND	20.0
08-Feb-89 T T r	Methyl methanesulfonate	ND	20.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 20.0	
09-Jan-89 P r	N-Nitrosodi-n-butylamine	ND	25.0
23-Jan-89 P T T	N-Nitrosodi-n-butylamine	ND	50.0
23-Jan-89 P T r	N-Nitrosodi-n-butylamine	ND	50.0
03-Feb-89 T r	N-Nitrosodi-n-butylamine	ND	17.0
08-Feb-89 T T T	N-Nitrosodi-n-butylamine	ND	50.0
07-Feb-89 T T r	N-Nitrosodi-n-butylamine	ND	50.0
08-Feb-89 T T r	N-Nitrosodi-n-butylamine	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	N-Nitrosodimethylamine	ND	25.0
23-Jan-89 P T T	N-Nitrosodimethylamine	ND	50.0
23-Jan-89 P T r	N-Nitrosodimethylamine	ND	50.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
03-Feb-89 T r	N-Nitrosodimethylamine	ND	17.0
08-Feb-89 T T T	N-Nitrosodimethylamine	ND	50.0
07-Feb-89 T T r	N-Nitrosodimethylamine	ND	50.0
08-Feb-89 T T r	N-Nitrosodimethylamine	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	N-Nitrosodiphenylamine	ND	25.0
23-Jan-89 P T T	N-Nitrosodiphenylamine	ND	50.0
23-Jan-89 P T r	N-Nitrosodiphenylamine	ND	50.0
03-Feb-89 T r	N-Nitrosodiphenylamine	ND	17.0
08-Feb-89 T T T	N-Nitrosodiphenylamine	ND	50.0
07-Feb-89 T T r	N-Nitrosodiphenylamine	ND	50.0
08-Feb-89 T T r	N-Nitrosodiphenylamine	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	N-Nitrosodipropylamine	ND	25.0
23-Jan-89 P T T	N-Nitrosodipropylamine	ND	50.0
23-Jan-89 P T r	N-Nitrosodipropylamine	ND	50.0
03-Feb-89 T r	N-Nitrosodipropylamine	ND	17.0
08-Feb-89 T T T	N-Nitrosodipropylamine	ND	50.0
07-Feb-89 T T r	N-Nitrosodipropylamine	ND	50.0
08-Feb-89 T T r	N-Nitrosodipropylamine	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	N-Nitrosopiperidine	ND	25.0
23-Jan-89 P T T	N-Nitrosopiperidine	ND	50.0
23-Jan-89 P T r	N-Nitrosopiperidine	ND	50.0
03-Feb-89 T r	N-Nitrosopiperidine	ND	17.0
08-Feb-89 T T T	N-Nitrosopiperidine	ND	50.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
07-Feb-89 T T r	N-Nitrosopiperidine	ND	50.0
08-Feb-89 T T r	N-Nitrosopiperidine	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	Naphthalene		55.0
23-Jan-89 P T T	Naphthalene	ND	10.0
23-Jan-89 P T r	Naphthalene	ND	10.0
03-Feb-89 T r	Naphthalene	ND	3.3
08-Feb-89 T T T	Naphthalene	ND	10.0
07-Feb-89 T T r	Naphthalene	ND	10.0
08-Feb-89 T T r	Naphthalene	ND	10.0
Total Number of Blanks = 7		Concentration Range	55.0 - 55.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Nitrobenzene	ND	5.0
23-Jan-39 P T T	Nitrobenzene	ND	10.0
23-Jan-89 P T r	Nitrobenzene	ND	10.0
03-Feb-89 T r	Nitrobenzene	ND	3.3
08-Feb-89 T T T	Nitrobenzene	ND	10.0
07-Feb-89 T T r	Nitrobenzene	ND	10.0
08-Feb-89 T T r	Nitrobenzene	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Pentachlorobenzene		26.0
23-Jan-89 P T T	Pentachlorobenzene	ND	10.0
23-Jan-89 P T r	Pentachlorobenzene	ND	10.0
03-Feb-89 T r	Pentachlorobenzene	ND	3.3
08-Feb-89 T T T	Pentachlorobenzene	ND	10.0
07-Feb-89 T T r	Pentachlorobenzene	ND	10.0
08-Feb-89 T T r	Pentachlorobenzene	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number of Blanks = 7		Concentration Range	26.0 - 26.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Pentachloronitrobenzene	ND	50.0
23-Jan-89 P T T	Pentachloronitrobenzene	ND	100
23-Jan-89 P T r	Pentachloronitrobenzene	ND	100
03-Feb-89 T r	Pentachloronitrobenzene	ND	33.0
08-Feb-89 T T T	Pentachloronitrobenzene	ND	100
07-Feb-89 T T r	Pentachloronitrobenzene	ND	100
08-Feb-89 T T r	Pentachloronitrobenzene	ND	100
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	Pentachlorophenol	ND	25.0
23-Jan-89 P T T	Pentachlorophenol	ND	50.0
23-Jan-89 P T r	Pentachlorophenol	ND	50.0
03-Feb-89 T r	Pentachlorophenol	ND	17.0
08-Feb-89 T T T	Pentachlorophenol	ND	50.0
07-Feb-89 T T r	Pentachlorophenol	ND	50.0
08-Feb-89 T T r	Pentachlorophenol	ND	50.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 50.0	
09-Jan-89 P r	Phenacetin	ND	50.0
23-Jan-89 P T T	Phenacetin	ND	100
23-Jan-89 P T r	Phenacetin	ND	100
03-Feb-89 T r	Phenacetin	ND	33.0
08-Feb-89 T T T	Phenacetin	ND	100
07-Feb-89 T T r	Phenacetin	ND	100
08-Feb-89 T T r	Phenacetin	ND	100
Total Number of Blanks = 7		Concentration Range	NC

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	
09-Jan-89 P r	Phenanthrene		45.0
23-Jan-89 P T T	Phenanthrene	ND	10.0
23-Jan-89 P T r	Phenanthrene	ND	10.0
03-Feb-89 T r	Phenanthrene	ND	3.3
08-Feb-89 T T T	Phenanthrene	ND	10.0
07-Feb-89 T T r	Phenanthrene	ND	10.0
08-Feb-89 T T r	Phenanthrene	ND	10.0
Total Number of Blanks = 7		Concentration Range	45.0 - 45.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Phenol		50.0
23-Jan-89 P T T	Phenol	ND	10.0
23-Jan-89 P T r	Phenol	ND	10.0
03-Feb-89 T r	Phenol	ND	3.3
08-Feb-89 T T T	Phenol	ND	10.0
07-Feb-89 T T r	Phenol	ND	10.0
08-Feb-89 T T r	Phenol	ND	10.0
Total Number of Blanks = 7		Concentration Range	50.0 - 50.0
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	Pronamide	ND	50.0
23-Jan-89 P T T	Pronamide	ND	100
23-Jan-89 P T r	Pronamide	ND	100
03-Feb-89 T r	Pronamide	ND	33.0
08-Feb-89 T T T	Pronamide	ND	100
07-Feb-89 T T r	Pronamide	ND	100
08-Feb-89 T T r	Pronamide	ND	100
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 100.0	

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
23-Jan-89 P T T	Pyrene	ND	10.0
23-Jan-89 P T r	Pyrene	ND	10.0
07-Dec-88 T f	Pyrene	<5X	8.5
03-Feb-89 T r	Pyrene	ND	3.3
08-Feb-89 T T T	Pyrene	ND	10.0
07-Feb-89 T T r	Pyrene	ND	10.0
08-Feb-89 T T r	Pyrene	ND	10.0
Total Number of Blanks = 7		Concentration Range	8.5 - 8.5
Total Number above Detection Limit = 1		Maximum Detection Limit = 10.0	
09-Jan-89 P r	a,a-Dimethylphenethylamine	ND	13.0
23-Jan-89 P T T	a,a-Dimethylphenethylamine	ND	25.0
23-Jan-89 P T r	a,a-Dimethylphenethylamine	ND	25.0
03-Feb-89 T r	a,a-Dimethylphenethylamine	ND	8.3
08-Feb-89 T T T	a,a-Dimethylphenethylamine	ND	25.0
07-Feb-89 T T r	a,a-Dimethylphenethylamine	ND	25.0
08-Feb-89 T T r	a,a-Dimethylphenethylamine	ND	25.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 25.0	
09-Jan-89 P r	bis(2-Chloroethoxy)methane	ND	5.0
23-Jan-89 P T T	bis(2-Chloroethoxy)methane	ND	10.0
23-Jan-89 P T r	bis(2-Chloroethoxy)methane	ND	10.0
03-Feb-89 T r	bis(2-Chloroethoxy)methane	ND	3.3
08-Feb-89 T T T	bis(2-Chloroethoxy)methane	ND	10.0
07-Feb-89 T T r	bis(2-Chloroethoxy)methane	ND	10.0
08-Feb-89 T T r	bis(2-Chloroethoxy)methane	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	bis(2-Chloroethyl)ether	ND	5.0
23-Jan-89 P T T	bis(2-Chloroethyl)ether	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
23-Jan-89 P T r	bis(2-Chloroethyl)ether	ND	10.0
03-Feb-89 T r	bis(2-Chloroethyl)ether	ND	3.3
08-Feb-89 T T T	bis(2-Chloroethyl)ether	ND	10.0
07-Feb-89 T T r	bis(2-Chloroethyl)ether	ND	10.0
08-Feb-89 T T r	bis(2-Chloroethyl)ether	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	bis(2-Chloroisopropyl)ether	ND	5.0
23-Jan-89 P T T	bis(2-Chloroisopropyl)ether	ND	10.0
23-Jan-89 P T r	bis(2-Chloroisopropyl)ether	ND	10.0
03-Feb-89 T r	bis(2-Chloroisopropyl)ether	ND	3.3
08-Feb-89 T T T	bis(2-Chloroisopropyl)ether	ND	10.0
07-Feb-89 T T r	bis(2-Chloroisopropyl)ether	ND	10.0
08-Feb-89 T T r	bis(2-Chloroisopropyl)ether	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
23-Jan-89 P T T	bis(2-Ethylhexyl)phthalate	ND	10.0
23-Jan-89 P T r	bis(2-Ethylhexyl)phthalate	ND	10.0
07-Dec-88 T f	bis(2-Ethylhexyl)phthalate	<5X	14.0
03-Feb-89 T r	bis(2-Ethylhexyl)phthalate	ND	3.3
08-Feb-89 T T T	bis(2-Ethylhexyl)phthalate	ND	10.0
07-Feb-89 T T r	bis(2-Ethylhexyl)phthalate	<5X	26.0
08-Feb-89 T T r	bis(2-Ethylhexyl)phthalate	ND	10.0
Total Number of Blanks = 7		Concentration Range	14.0 - 26.0
Total Number above Detection Limit = 2		Maximum Detection Limit = 10.0	
09-Jan-89 P r	o-Cresol	ND	5.0
23-Jan-89 P T T	o-Cresol	ND	10.0
23-Jan-89 P T r	o-Cresol	ND	10.0
03-Feb-89 T r	o-Cresol	ND	3.3

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
08-Feb-89 T T T	o-Cresol	ND	10.0
07-Feb-89 T T r	o-Cresol	ND	10.0
08-Feb-89 T T r	o-Cresol	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	p-Chloroaniline	ND	10.0
23-Jan-89 P T T	p-Chloroaniline	ND	20.0
23-Jan-89 P T r	p-Chloroaniline	ND	20.0
03-Feb-89 T r	p-Chloroaniline	ND	6.6
08-Feb-89 T T T	p-Chloroaniline	ND	20.0
07-Feb-89 T T r	p-Chloroaniline	ND	20.0
08-Feb-89 T T r	p-Chloroaniline	ND	20.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 20.0	
09-Jan-89 P r	p-Cresol	ND	5.0
23-Jan-89 P T T	p-Cresol	ND	10.0
23-Jan-89 P T r	p-Cresol	ND	10.0
03-Feb-89 T r	p-Cresol	ND	3.3
08-Feb-89 T T T	p-Cresol	ND	10.0
07-Feb-89 T T r	p-Cresol	ND	10.0
08-Feb-89 T T r	p-Cresol	ND	10.0
Total Number of Blanks = 7		Concentration Range	NC
Total Number above Detection Limit = 0		Maximum Detection Limit = 10.0	
09-Jan-89 P r	p-Dimethylaminoazobenzene	ND	5.0
23-Jan-89 P T T	p-Dimethylaminoazobenzene	ND	10.0
23-Jan-89 P T r	p-Dimethylaminoazobenzene	ND	10.0
03-Feb-89 T r	p-Dimethylaminoazobenzene	ND	3.3
08-Feb-89 T T T	p-Dimethylaminoazobenzene	ND	10.0
07-Feb-89 T T r	p-Dimethylaminoazobenzene	ND	10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Semivolatile Organics			
08-Feb-89 T T r	p-Dimethylaminoazobenzene	ND	10.0

Total Number of Blanks = 7 Concentration Range NC
Total Number above Detection Limit = 0 Maximum Detection Limit = 10.0

Metals, Cold Vapor			
04-Jan-89 P	p Mercury	ND	0.00020
04-Jan-89 P	p Mercury	ND	0.00020
04-Jan-89 P	p Mercury	ND	0.00020
04-Jan-89 P	p Mercury	ND	0.00020
05-Jan-89 P	p Mercury	ND	0.00020
05-Jan-89 P	p Mercury	ND	0.00020
12-Jan-89 P B B	Mercury	ND	0.00020
12-Jan-89 P B B	Mercury	ND	0.00020
12-Jan-89 P B p	Mercury	ND	0.00020
12-Jan-89 P B p	Mercury	ND	0.00020
23-Jan-89 P B p	Mercury	ND	0.00020
23-Jan-89 P B p	Mercury	ND	0.00020
24-Jan-89 P B p	Mercury	ND	0.00020
24-Jan-89 P B p	Mercury	ND	0.00020
24-Jan-89 P B p	Mercury	ND	0.00020
12-Jan-89 P E E	Mercury	ND	0.00020
12-Jan-89 P E E	Mercury	ND	0.00020
12-Jan-89 P E p	Mercury	ND	0.00020
12-Jan-89 P E p	Mercury	ND	0.00020
17-Mar-89 P E p	Mercury	ND	0.00010
17-Mar-89 P E p	Mercury	ND	0.00010
17-Mar-89 P E p	Mercury	ND	0.00010
16-Jan-89 P T T	Mercury	ND	0.00020
16-Jan-89 P T p	Mercury	ND	0.00020
16-Jan-89 P T p	Mercury	ND	0.00020
16-Jan-89 P T p	Mercury	ND	0.00020
23-Jan-89 P T p	Mercury	ND	0.00020

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, Cold Vapor			
30-Jan-89 T p	Mercury	ND	0.00020
30-Jan-89 T p	Mercury	ND	0.00020
30-Jan-89 T p	Mercury	ND	0.00020
01-Feb-89 T A p	Mercury	ND	0.00020
01-Feb-89 T A p	Mercury	ND	0.00020
01-Feb-89 T A p	Mercury	ND	0.00020
01-Feb-89 T A p	Mercury	ND	0.00020
02-Feb-89 T A p	Mercury	ND	0.00020
02-Feb-89 T A p	Mercury	ND	0.00020
02-Feb-89 T A p	Mercury	ND	0.00020
08-Feb-89 T A p	Mercury	ND	0.00020
08-Feb-89 T A p	Mercury	ND	0.00020
22-Feb-89 T A p	Mercury	ND	0.00010
22-Feb-89 T A p	Mercury	ND	0.00010
22-Feb-89 T A p	Mercury	ND	0.00010
13-Mar-89 T A p	Mercury	ND	0.00020
13-Mar-89 T A p	Mercury	ND	0.00020
13-Mar-89 T A p	Mercury	ND	0.00020
13-Mar-89 T A p	Mercury	ND	0.00020
08-Feb-89 T B p	Mercury	ND	0.00020
08-Feb-89 T B p	Mercury	ND	0.00020
08-Feb-89 T B p	Mercury	ND	0.00020
08-Feb-89 T B p	Mercury	ND	0.00020
15-Feb-89 T B p	Mercury	ND	0.00020
15-Feb-89 T B p	Mercury	ND	0.00020
17-Feb-89 T B p	Mercury	ND	0.00020
17-Feb-89 T B p	Mercury	ND	0.00020
17-Feb-89 T B p	Mercury	ND	0.00020
24-Feb-89 T B p	Mercury	ND	0.00020
24-Feb-89 T B p	Mercury	ND	0.00020
24-Feb-89 T B p	Mercury	ND	0.00020
24-Feb-89 T B p	Mercury	ND	0.00020
27-Feb-89 T B p	Mercury	ND	0.00020
27-Feb-89 T B p	Mercury	ND	0.00020
27-Feb-89 T B p	Mercury	ND	0.00020

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, Cold Vapor			
27-Feb-89 T B p	Mercury	ND	0.00020
27-Feb-89 T B p	Mercury	ND	0.00020
07-Apr-89 T B p	Mercury	ND	0.00020
07-Apr-89 T B p	Mercury	ND	0.00020
07-Apr-89 T B p	Mercury	ND	0.00020
15-Feb-89 T E E	Mercury	ND	0.00020
15-Feb-89 T E p	Mercury	ND	0.00020
15-Feb-89 T E p	Mercury	ND	0.00020
08-Feb-89 T T T	Mercury	ND	0.00020
02-Feb-89 T T p	Mercury	<5V	0.00020
02-Feb-89 T T p	Mercury	ND	0.00020
06-Feb-89 T T p	Mercury	ND	0.00020
06-Feb-89 T T p	Mercury	ND	0.00020
06-Feb-89 T T p	Mercury	ND	0.00020
08-Feb-89 T T p	Mercury	ND	0.00020
08-Feb-89 T T p	Mercury	ND	0.00020
10-Feb-89 T T p	Mercury	ND	0.00020
10-Feb-89 T T p	Mercury	ND	0.00020
17-Mar-89 T T p	Mercury	ND	0.00020
17-Mar-89 T T p	Mercury	ND	0.00010
17-Mar-89 T T p	Mercury	ND	0.00010
25-May-89 T T p	Mercury	ND	0.00010
25-May-89 T T p	Mercury	ND	0.00020
26-May-89 T T p	Mercury	ND	0.00020
26-May-89 T T p	Mercury	ND	0.00020
26-May-89 T T p	Mercury	ND	0.00020
26-May-89 T T p	Mercury	ND	0.00020
26-May-89 T T p	Mercury	ND	0.00020

Total Number of Blanks = 89
Total Number above Detection Limit = 1

Concentration Range 0.00020 - 0.00020
Maximum Detection Limit = 0.00020

Metals, Graphite Furnace			
23-Jan-89 P p	Arsenic, graphite AA	ND	0.16

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, Graphite Furnace			
23-Jan-89 P B B	Arsenic, graphite AA	<5X	0.0050
23-Jan-89 P B p	Arsenic, graphite AA	ND	0.0020
26-Jan-89 P B p	Arsenic, graphite AA	ND	0.0020
26-Jan-89 P B p	Arsenic, graphite AA	ND	0.0020
23-Jan-89 P E E	Arsenic, graphite AA	<5X	0.0020
23-Jan-89 P E p	Arsenic, graphite AA	ND	0.0020
23-Mar-89 P E p	Arsenic, graphite AA	ND	0.10
23-Mar-89 P E p	Arsenic, graphite AA	ND	0.0010
23-Jan-89 P T T	Arsenic, graphite AA	<5X	0.0050
20-Jan-89 P T p	Arsenic, graphite AA	ND	0.0020
23-Jan-89 P T p	Arsenic, graphite AA	ND	0.0020
27-Jan-89 T p	Arsenic, graphite AA	ND	0.0020
01-Feb-89 T A p	Arsenic, graphite AA	ND	0.0020
07-Feb-89 T A p	Arsenic, graphite AA	ND	0.0050
08-Feb-89 T A p	Arsenic, graphite AA	ND	0.0020
09-Mar-89 T A p	Arsenic, graphite AA	ND	0.0020
16-Feb-89 T B p	Arsenic, graphite AA	ND	0.0020
24-Feb-89 T B p	Arsenic, graphite AA	ND	0.0020
02-Mar-89 T B p	Arsenic, graphite AA	ND	0.0020
03-Mar-89 T B p	Arsenic, graphite AA	ND	0.0020
03-Apr-89 T B p	Arsenic, graphite AA	ND	0.0010
10-Feb-89 T E E	Arsenic, graphite AA	ND	0.0020
10-Feb-89 T E p	Arsenic, graphite AA	ND	0.0020
10-Feb-89 T E p	Arsenic, graphite AA	ND	0.0020
10-Feb-89 T E p	Arsenic, graphite AA	ND	0.0020
11-Apr-89 T E p	Arsenic, graphite AA	ND	0.0020
08-Feb-89 T T T	Arsenic, graphite AA	ND	0.0020
03-Feb-89 T T p	Arsenic, graphite AA	ND	0.0020
09-Feb-89 T T p	Arsenic, graphite AA	ND	0.0020
23-Mar-89 T T p	Arsenic, graphite AA	ND	0.0010
23-Mar-89 T T p	Arsenic, graphite AA	ND	0.10
26-May-89 T T p	Arsenic, graphite AA	ND	0.0010
26-May-89 T T p	Arsenic, graphite AA	ND	0.0010

Total Number of Blanks = 34 Concentration Range 0.0020 - 0.0050

Matrix: P = Pretreatment, T = Treated

Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT

Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution

E = EP Leaching Solution, B = BET Leaching Solution

A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,

r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, Graphite Furnace			
Total Number above Detection Limit = 3		Maximum Detection Limit = 0.16	
18-Jan-89 S B p	Lead, graphite AA	<5X	0.0070
25-Jan-89 P B p	Lead, graphite AA	<5X	0.0040
03-Feb-89 P B p	Lead, graphite AA	<5X	0.0080
03-Feb-89 P B p	Lead, graphite AA	<5X	0.0030
09-Feb-89 P B p	Lead, graphite AA	ND	0.0020
15-Mar-89 P E E	Lead, graphite AA	ND	0.0020
20-Mar-89 P E E	Lead, graphite AA	ND	0.0020
14-Mar-89 P E p	Lead, graphite AA	ND	0.0020
20-Mar-89 P E p	Lead, graphite AA	ND	0.0020
31-Mar-89 P T T	Lead, graphite AA	ND	0.0020
11-Apr-89 T B p	Lead, graphite AA	<5X	0.0030
31-Mar-89 T E E	Lead, graphite AA	<5X	0.0050
04-Apr-89 T E p	Lead, graphite AA	<5X	0.0060
04-Apr-89 T E p	Lead, graphite AA	<5X	0.0050
14-Mar-89 T T p	Lead, graphite AA	ND	0.0020
Total Number of Blanks = 15		Concentration Range 0.0030 - 0.0080	
Total Number above Detection Limit = 8		Maximum Detection Limit = 0.0020	
19-Jan-89 P p	Selenium, graphite AA	ND	0.0050
20-Jan-89 P B E	Selenium, graphite AA	ND	0.0050
20-Jan-89 P B p	Selenium, graphite AA	ND	0.0050
25-Jan-89 P B p	Selenium, graphite AA	ND	0.0050
25-Jan-89 P B p	Selenium, graphite AA	ND	0.0050
20-Jan-89 P E E	Selenium, graphite AA	ND	0.0040
20-Jan-89 P E p	Selenium, graphite AA	ND	0.0050
15-Mar-89 P E p	Selenium, graphite AA	ND	0.0040
16-Mar-89 P E p	Selenium, graphite AA	ND	0.40
20-Jan-89 P T T	Selenium, graphite AA	ND	0.0040
19-Jan-89 P T p	Selenium, graphite AA	ND	0.0050
19-Jan-89 P T p	Selenium, graphite AA	ND	0.0050
20-Jan-89 P T p	Selenium, graphite AA	ND	0.0040
27-Jan-89 T p	Selenium, graphite AA	ND	0.0050

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, F = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = AWS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, gr Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Metals, Graphite Furnace			
01-Feb-89 T A p	Selenium, graphite AA	ND	0.0040
09-Mar-89 T A p	Selenium, graphite AA	ND	0.0040
10-Feb-89 T B p	Selenium, graphite AA	ND	0.0040
16-Feb-89 T B p	Selenium, graphite AA	ND	0.0040
01-Mar-89 T B p	Selenium, graphite AA	ND	0.0040
03-Mar-89 T B p	Selenium, graphite AA	ND	0.0040
03-Mar-89 T B p	Selenium, graphite AA	ND	0.0040
11-Apr-89 T B p	Selenium, graphite AA	ND	0.0020
21-Feb-89 T E E	Selenium, graphite AA	<5X	0.0040
10-Feb-89 T E p	Selenium, graphite AA	ND	0.0040
10-Feb-89 T E p	Selenium, graphite AA	ND	0.0050
20-Feb-89 T E p	Selenium, graphite AA	ND	0.0020
11-Apr-89 T E p	Selenium, graphite AA	ND	0.0020
08-Feb-89 T T T	Selenium, graphite AA	ND	0.0050
03-Feb-89 T T p	Selenium, graphite AA	ND	0.0050
07-Feb-89 T T p	Selenium, graphite AA	ND	0.0050
15-Mar-89 T T p	Selenium, graphite AA	ND	0.0040
16-Mar-89 T T p	Selenium, graphite AA	ND	0.40
25-May-89 T T p	Selenium, graphite AA	ND	0.0020
25-May-89 T T p	Selenium, graphite AA	ND	0.0020

Total Number of Blanks = 34
Total Number above Detection Limit = 1

Concentration Range 0.0040 - 0.0040
Maximum Detection Limit = 0.40

18-Jan-89 P p	Thallium, graphite AA	ND	0.0010
20-Jan-89 P B B	Thallium, graphite AA	ND	0.0010
20-Jan-89 P B p	Thallium, graphite AA	ND	0.0010
26-Jan-89 P B p	Thallium, graphite AA	ND	0.0020
26-Jan-89 P B p	Thallium, graphite AA	ND	0.0020
20-Jan-89 P E E	Thallium, graphite AA	ND	0.0020
23-Jan-89 P E E	Thallium, graphite AA	ND	0.0020
20-Jan-89 P E p	Thallium, graphite AA	ND	0.0010
14-Mar-89 P E p	Thallium, graphite AA	ND	0.20
17-Mar-89 P E p	Thallium, graphite AA	ND	0.0020
20-Jan-89 P T T	Thallium, graphite AA	ND	0.0010

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, gr Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type Parameter	Detection Flag	Measured Value
Metals, Graphite Furnace		
20-Jan-89 P T p Thallium, graphite AA	ND	0.0010
27-Jan-89 T p Thallium, graphite AA	ND	0.0020
01-Feb-89 T A p Thallium, graphite AA	ND	0.0020
13-Feb-89 T A p Thallium, graphite AA	ND	0.0010
14-Mar-89 T A p Thallium, graphite AA	<5X	0.0020
27-Feb-89 T B p Thallium, graphite AA	ND	0.0010
03-Mar-89 T B p Thallium, graphite AA	ND	0.0010
06-Mar-89 T B p Thallium, graphite AA	ND	0.0020
06-Mar-89 T B p Thallium, graphite AA	ND	0.0020
04-Apr-89 T B p Thallium, graphite AA	ND	0.0020
13-Feb-89 T E E Thallium, graphite AA	ND	0.0010
13-Feb-89 T E p Thallium, graphite AA	ND	0.0010
13-Feb-89 T E p Thallium, graphite AA	ND	0.0010
04-Apr-89 T E p Thallium, graphite AA	ND	0.0020
11-Apr-89 T E p Thallium, graphite AA	ND	0.0020
10-Feb-89 T T T Thallium, graphite AA	ND	0.0020
03-Feb-89 T T p Thallium, graphite AA	ND	0.0010
10-Feb-89 T T p Thallium, graphite AA	ND	0.0020
14-Mar-89 T T p Thallium, graphite AA	ND	0.20
14-Mar-89 T T p Thallium, graphite AA	ND	0.20
17-Mar-89 T T p Thallium, graphite AA	ND	0.0020
30-May-89 T T p Thallium, graphite AA	ND	0.0020
30-May-89 T T p Thallium, graphite AA	ND	0.0020

Total Number of Blanks = 34
Total Number above Detection Limit = 1

Concentration Range 0.0020 - 0.0020
Maximum Detection Limit = 0.20

Infrared Methods		
19-Jan-89 P B B Oil and grease, infrared	ND	0.40
19-Jan-89 P E E Oil and grease, infrared	ND	0.40
26-Jan-89 P T T Oil and grease, infrared	ND	0.40
26-Jan-89 P T a Oil and grease, infrared	ND	0.40
26-Jan-89 P T a Oil and grease, infrared	ND	0.40

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Infrared Methods			
21-Feb-89 T A a	Oil and grease, infrared	ND	0.40
27-Feb-89 T A a	Oil and grease, infrared	ND	0.40
07-Mar-89 T A a	Oil and grease, infrared	ND	0.40
12-Mar-89 T A a	Oil and grease, infrared	ND	0.40
27-Feb-89 T B a	Oil and grease, infrared	ND	0.40
27-Feb-89 T B a	Oil and grease, infrared	ND	0.40
07-Mar-89 T B a	Oil and grease, infrared	ND	0.40
21-Feb-89 T E E	Oil and grease, infrared	ND	0.40
21-Feb-89 T E a	Oil and grease, infrared	ND	0.40
21-Feb-89 T E a	Oil and grease, infrared	ND	0.40
21-Feb-89 T T T	Oil and grease, infrared	ND	0.40
Total Number of Blanks = 16		Concentration Range NC	
Total Number above Detection Limit = 0		Maximum Detection Limit = 0.40	
20-Jan-89 P B B	Total organic carbon	<5X	4.0
24-Jan-89 P B p	Total organic carbon	<5X	1.6
24-Jan-89 P B p	Total organic carbon	<5X	2.0
24-Jan-89 P B p	Total organic carbon	<5X	1.0
24-Jan-89 P B p	Total organic carbon	<5X	1.7
24-Jan-89 P B p	Total organic carbon	<5X	1.5
24-Jan-89 P B p	Total organic carbon	<5X	1.0
24-Jan-89 P B p	Total organic carbon	<5X	2.0
24-Jan-89 P B p	Total organic carbon	<5X	2.0
09-Feb-89 T A p	Total organic carbon	<5X	1.9
09-Feb-89 T A p	Total organic carbon	<5X	1.7
09-Feb-89 T A p	Total organic carbon	<5X	1.7
13-Feb-89 T A p	Total organic carbon	<5X	1.6
13-Feb-89 T A p	Total organic carbon	<5X	1.3
13-Feb-89 T A p	Total organic carbon	<5X	1.3
13-Feb-89 T A p	Total organic carbon	<5X	1.3
13-Feb-89 T A p	Total organic carbon	<5X	1.3
13-Feb-89 T A p	Total organic carbon	<5X	1.0
17-Feb-89 T A p	Total organic carbon	<5X	1.1
17-Feb-89 T A p	Total organic carbon	<5X	1.1

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type Parameter	Detection Flag	Measured Value
Infrared Methods		
20-Feb-89 T A p Total organic carbon	<5X	1.2
20-Feb-89 T A p Total organic carbon	<5X	1.1
10-Mar-89 T A p Total organic carbon	ND	1.0
09-Feb-89 T B p Total organic carbon	<5X	1.9
09-Feb-89 T B p Total organic carbon	<5X	1.9
09-Feb-89 T B p Total organic carbon	<5X	1.7
13-Feb-89 T B p Total organic carbon	<5X	1.6
13-Feb-89 T B p Total organic carbon	<5X	1.3
13-Feb-89 T B p Total organic carbon	<5X	1.3
13-Feb-89 T B p Total organic carbon	<5X	1.6
13-Feb-89 T B p Total organic carbon	<5X	1.3
13-Feb-89 T B p Total organic carbon	<5X	1.6
13-Feb-89 T B p Total organic carbon	<5X	1.0
17-Feb-89 T B p Total organic carbon	<5X	1.1
17-Feb-89 T B p Total organic carbon	<5X	1.1
20-Feb-89 T B p Total organic carbon	<5X	1.4
20-Feb-89 T B p Total organic carbon	<5X	1.1
20-Feb-89 T B p Total organic carbon	<5X	1.5
06-Mar-89 T B p Total organic carbon	ND	1.0
10-Mar-89 T B p Total organic carbon	ND	1.0

Total Number of Blanks = 40
Total Number above Detection Limit = 37
Concentration Range 1.0 - 4.0
Maximum Detection Limit = 1.0

Filterable Residue (TDS)		
09-Jan-89 P B B Filterable Residue (TDS)	<5X	30.0
09-Jan-89 P B a Filterable Residue (TDS)	ND	10.0
18-Jan-89 P B a Filterable Residue (TDS)	ND	6.0
23-Jan-89 P B a Filterable Residue (TDS)	ND	10.0
24-Jan-89 P B a Filterable Residue (TDS)	ND	10.0
09-Jan-89 P E E Filterable Residue (TDS)	<5X	20.0
09-Jan-89 P E a Filterable Residue (TDS)	ND	6.0
16-Jan-89 P T T Filterable Residue (TDS)		4600

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = ANS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = ANS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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ATTACHMENT A.11 DETAILED BLANK RESULTS

Date/Matrix/Submatrix/Type	Parameter	Detection Flag	Measured Value
Filterable Residue (TDS)			
16-Jan-89 P T a	Filterable Residue (TDS)	ND	6.0
18-Jan-89 P T a	Filterable Residue (TDS)	ND	6.0
31-Jan-89 T A a	Filterable Residue (TDS)	ND	6.0
03-Feb-89 T A a	Filterable Residue (TDS)	<5X	16.0
09-Feb-89 T A a	Filterable Residue (TDS)	<5X	14.0
09-Feb-89 T A a	Filterable Residue (TDS)	ND	6.0
28-Feb-89 T A a	Filterable Residue (TDS)	ND	6.0
17-Feb-89 T B a	Filterable Residue (TDS)	ND	6.0
21-Feb-89 T B a	Filterable Residue (TDS)	ND	6.0
08-Feb-89 T E E	Filterable Residue (TDS)		67.0
08-Feb-89 T E a	Filterable Residue (TDS)	<5X	24.2
09-Feb-89 T E a	Filterable Residue (TDS)	ND	6.0
31-Jan-89 T T T	Filterable Residue (TDS)	<5X	29.0
31-Jan-89 T T a	Filterable Residue (TDS)	ND	6.0
03-Feb-89 T T a	Filterable Residue (TDS)	<5X	16.0

Total Number of Blanks = 23
Total Number above Detection Limit = 9

Concentration Range 14.0 - 4600.0
Maximum Detection Limit = 10.0

Matrix: P = Pretreatment, T = Treated
Submatrix (Leachates): T = TCLP, A = AWS 16.1, B = BET, E = EP, W = WILT
Type: p = Preparation, a = Analytical, f = Field, T = TCLP Leaching Solution
E = EP Leaching Solution, B = BET Leaching Solution
A = AWS 16.1 Leaching Solution, W = WILT Leaching Solution,
r = Reagent, c = Cleanup, g= Methanol, s = System

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APPENDIX C

LABORATORY DATA FROM THE TREATABILITY STUDY

Appendix C contains analytical data generated from raw and treated waste samples which were collected and solidified for the treatability study. This treatability was performed by Soliditech on samples of waste collected from the Imperial Oil Company/ Champion Chemical Company site in May and June of 1988.

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PRELIMINARY SITE DATA FOR THE SITE DEMONSTRATION OF SOLIDITECH, INC. SOLIDIFICATION TECHNOLOGY

Prepared for:

U.S. Environmental Protection Agency
Risk Reduction Engineering Laboratory
Office of Research and Development
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Contract No. 68-03-3484

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28 September 1988

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APPENDIX C

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COMPLETENESS REPORT FOR THE PRELIMINARY SOLIDITECH SITE SAMPLES (ANALYSES COMPLETED/ANALYSES REQUESTED)

Parameter	Table Number	Tank Soil/Oil	Waste Pile	Off-Site Area 1	Off-Site Area 2	SRM-1	SRM-2	SRM-3	SRM-4	Analyses
RAW SOIL										
TWA-VOCs	1	2/2 (a)	2/2	2/2						6/6
BNAs	2	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	8/8
PCBs & Pesticides, 8080	4	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	8/8
PCBs & Pesticides, 680										
Metals (PP-13)	6	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	8/8
	8			1/1						1/1
TCLP-BNAs	3		1/1							1/1
PCBs & Pesticides, 8080	5		1/1							1/1
Metals (PP-13)	7		1/1							1/1
TREATED SOILS										
TCLP-BNAs	3	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	8/8
PCBs, 8080	5	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	8/8
Metals (PP-13)	7	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	8/8
REAGENT MIX										
TWA-BNAs	9									3/3

(a) Analyses completed /analyses requested.

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TABLE [illegible] [illegible] RESULTS FOR THE PRELIMINARY SOLIDITECH SITE SAMPLES

Compound	Concentration, µg/g (ppm)						
	Tank Sludge		Waste Pile		Off-Site #1		Methanol Blank
	Site Sample	Lab Sample	Site Sample	Lab Sample	Site Sample	Lab Sample	
Acetone	55	2.5	9.0	3.1	25	ND	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND
Benzene	3.1	0.66	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Ethyl methacrylate	ND	ND	ND	ND	ND	ND	ND
Ethyl benzene	12	4.3	0.63	ND	0.38	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	0.45	ND	ND
Methyl ethyl ketone	17	3.0	8.8	7.0	45	5.5	3.7
4-Methyl-2-pentanone	ND	2.4	ND	ND	ND	ND	ND
Styrene	ND	0.17	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	2.1	0.78	ND	ND	ND	ND	ND
Toluene	25	[illegible]	[illegible]	ND	0.46	0.20	ND
Trichloroethene	10	4.4	ND	ND	0.23	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND
Xylenes	46	25	3.7	0.5	3.2	0.2	ND

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TABLE 13. SURROGATE RECOVERIES FOR VOCs IN THE PRELIMINARY SOLVOTECH SITE SAMPLES

Compound	Recovery, %						
	Tank Sludge		Waste Pile		D44-Site #1		Methanol Blank (a)
	Site Sample	Lab Sample	Site Sample	Lab Sample	Site Sample	Lab Sample	
1,4-1,2-Dichloroethane	100	105	104	106	107	109	106
D8-Toluene	98	96	97	97	91	100	98
1-Bromofluorobenzene	102	102	102	102	101	105	99

(a) Average results for two methanol blanks.

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TABLE [illegible]. BNA RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Concentration, ug/g (ppm)								
	Blank	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-19-19)	Untreated SRM (II-2-77)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-38)
Acenaphthalene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Acenaphthene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Acetophenone	<1	<4	<50	<4	<1	9.3	1.2	1.4	6
2-Acetylaminofluorene	<25	<100	<1200	<100	<25	<25	<25	<25	<25
4-Aminobiphenyl	<25	<100	<1200	<100	<25	<25	<25	<25	<25
Aniline	<2	<8	<100	<8	<2	<2	<2	<2	<2
Anthracene	<1	<4	<50	<4	<1	1800	550	960	2200
Aramite	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz(a)anthracene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Benzenethiol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Benzoic acid (a)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	<1	<4	<50	<4	<1	<1	<1	<1	<1
p-Benzoquinone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	<2	<8	<100	<8	<2	<2	<2	<2	<2
bis(2-Chloroethoxy)ethane	<1	<4	<50	<4	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	<1	<4	<50	<4	<1	<1	<1	<1	<1
bis(2-Chloroisopropyl)ether	<1	<4	<50	<4	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate	<1	<4	<50	71	24	330	150	380	1980
4-Bromophenyl phenyl ether	<1	<4	<50	<4	<1	<1	<1	<1	<1
Butyl benzyl phthalate	<1	<4	<50	125	6	<1	<1	<1	<1
2-sec-butyl-4,6-dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloroaniline	<20	<80	<1000	<80	<20	<20	<20	<20	<20
Chlorobenzilate	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-chloroethyl vinyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloro-m-cresol	<1	<4	<50	<4	<1	<1	<1	<1	<1
2-Chloronaphthalene	<1	<4	<50	<4	<1	<1	<1	<1	<1
2-Chlorophenol	<1	<4	<50	<4	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	<1	<4	<50	<4	<1	<1	<1	<1	<1
Chrysene	<1	<4	<50	<4	<1	<1	<1	<1	<1
p-Cresol	<1	<4	<50	<4	<1	<1	<1	<1	<1
p-Cresol	<1	<4	<50	<4	<1	<1	<1	<1	<1
Dibenzofuran	<1	<4	<50	<4	<1	1.1	<1	<1	1.9
Dibenzo(a,h)anthracene	<1	<4	<50	<4	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<4	<50	<4	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<4	<50	<4	<1	<1	<1	<1	<1

(continues)

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TABLE 2. GNA RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Concentration, ug/g (ppm)								
	Blank	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-19-19)	Untreated SRM (II-2-77)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-26)
1,4-Dichlorobenzene	1	4	50	<4	<1	<1	<1	<1	1
3,3'-Dichlorobenzidine	2	8	100	<8	<2	<2	2	<2	2
2,4-Dichlorophenol	1	4	50	<4	<1	<1	<1	<1	<1
2,6-Dichlorophenol	<1	4	50	<4	<1	<1	<1	1	1
Diethylphthalate	1	<4	50	<4	<1	<1	<1	<1	1
3-Diethylaminoazobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dimethoxybenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA
7,12-Dimethylbenz(a)anthracene	2	8	<20	<8	<2	<2	<2	<2	<2
3,3'-Dimethylbenzidine	5	<20	50	<20	<5	<5	5	<5	<5
3,3'-Dimethylbenzethylamine	25	100	<1200	<100	<25	<25	<25	<25	<25
2,4-Dimethylphenol	<1	4	50	<4	<1	<1	1	1	<1
Dimethylphthalate	<1	<4	50	<4	<1	TR	<1	<1	<1
1,3-Dinitrobenzene	10	40	500	<40	<10	<10	<10	<10	10
2,6-Dinitro-o-cresol	5	<20	250	<20	<5	<5	5	<5	<5
2,4-Dinitrophenol	5	<20	<250	<20	<5	<5	5	<5	<5
2,4-Dinitrotoluene	<1	4	50	<4	<1	<1	1	<1	<1
2,6-Dinitrotoluene	1	4	50	<4	<1	<1	1	<1	<1
Di-n-butylphthalate	1	4	<50	9.1	2.1	<1	<1	<1	<1
Di-n-octylphthalate	1	<4	<50	<4	<1	<1	1	<1	1
Diphenylnitrosamine	1	4	50	<4	<1	<1	<1	<1	1
Diphenylamine	1	4	50	<4	<1	1	<1	1	1
1,2-Diphenylhydrazine	<10	<40	500	<40	<10	<10	<10	<10	<10
Fluoranthene	1	4	50	<4	<1	<1	1	<1	<1
Fluorene	1	4	50	<4	<1	2.1	1	1	2.9
Hexachlorobenzene	<1	4	<50	<4	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	4	50	<4	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	1	4	50	<4	<1	<1	<1	<1	<1
Hexachloroethane	1	4	<50	<4	<1	<1	<1	<1	<1
Hexachlorophene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloropropene	1	4	<50	<4	<1	<1	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	1	4	<50	<4	<1	<1	1	<1	<1
Isophorone	<1	<4	<50	<4	<1	<1	<1	<1	<1
Isosafrole	<10	<40	500	<40	<10	<10	<10	<10	<10
Methapyrilene	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylcholanthrene	<10	<40	<50	<40	<10	<10	<10	<10	<10
4,4'-Methylenebis(2-chloroaniline)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl methanesulfonate	<2	8	100	<8	<2	<2	<2	<2	<2
2-Methylnaphthalene	<1	4	50	<4	<1	<1	<1	<1	<1
Naphthalene	<1	<4	<50	<4	<1	<1	<1	<1	2.4

(continued)

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TABLE 2. GC/MS RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Concentration, ug/g (ppm)								
	Blank	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-1-14)	Untreated SRM (II-2-17)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-38)
1,4-Naphthoquinone	<20	<80	1000	<80	<20	<20	<20	<20	<20
1-Naphthylamine	<10	<40	<500	<40	<10	<10	<10	<10	<10
2-Naphthylamine	<10	<40	<500	<40	<10	<10	<10	<10	<10
2-Nitroaniline	<5	<20	<250	<20	<5	<5	<5	<5	<5
3-Nitroaniline	<5	<20	<250	<20	<5	<5	<5	<5	<5
4-Nitroaniline	<5	<20	<250	<20	<5	<5	<5	<5	<5
Nitrobenzene	<1	<4	<50	<4	<1	<1	<1	<1	<1
2-Nitrophenol	<5	<20	<250	<20	<5	<5	<5	<5	<5
4-Nitrophenol	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosodi-n-butylamine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosodiethylamine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosodimethylamine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosodiphenylamine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosodipropylamine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosodiethylethylamine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosomorpholine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosopiperidine	<5	<20	<250	<20	<5	<5	<5	<5	<5
N-Nitrosopyrrolidine	<5	<20	<250	<20	<5	<5	<5	<5	<5
5-Nitro-o-toluidine	<5	<20	<250	<20	<5	<5	<5	<5	<5
Pentachlorobenzene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Pentachloroethane	<1	<4	<50	<4	<1	<1	<1	<1	<1
Pentachloronitrobenzene	<10	<40	<500	<40	<10	<10	<10	<10	<10
Pentachlorophenol	<5	<20	<250	<20	<5	560	44	120	280
Phenacetin	<10	<40	<500	<40	<10	<10	<10	<10	<10
Phenanthrene	<1	<4	<50	<4	<1	70	15	20	89
Phenol	<1	<4	<50	<4	<1	<1	<1	<1	<1
2-Picoline	<5	<20	<250	<20	<5	<5	<5	<5	<5
Pronamide	<10	<40	<500	<40	<10	<10	<10	<10	<10
Pyrene	<1	<4	<50	<4	<1	<1	<1	<1	<1
Pyridine	<1	<4	<50	<4	<1	<1	<1	<1	1.1
Resorcinol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safrole	<10	<40	<500	<40	<10	<10	<10	<10	<10
1,2,4,5-Tetrachlorobenzene	<10	<40	<500	<40	<10	<10	<10	<10	<10
2,3,4,6-Tetrachlorophenol	<10	<40	<500	<40	<10	70	<10	13	48
1,2,4-Trichlorobenzene	<1	<4	<50	<4	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	<5	<20	<250	<20	<5	<5	<5	<5	<5
2,4,6-Trichlorophenol	<5	<20	<250	<20	<5	<5	<5	<5	<5

(a) Benzoic acid was quantified using a response factor of 1.0.

NA Not available

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TABLE 10. SURROGATE RECOVERIES FOR BNAs IN THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Recovery, %								
	Blank	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-19-19)	Untreated SRM (II-2-77)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-38)
2-Fluorophenol	69	91	56	40	69	136	55	102	ND
Phenol-d5	69	93	59	36	70	74	90	131	132
Nitrobenzene-d5	70	85	77	41	77	95	96	157	147
2-Fluorobiphenyl	67	95	95	60	30	90	84	101	102
2,4,6-Tribromophenol	58	70	65	60	77	50	58	77	77
Terphenyl-d14	102	108	95	62	96	99	92	138	129

ND Not detected.

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TABLE 2. TCLP EXTRACT BNA RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Concentration, µg/L (ppb)									
	Blank	Untreated Waste Pile	Treated Waste Pile	Treated Tank Sludge	Treated 249-Site Area 1	Treated 244-Site Area 2	Treated SBM (I-19-19)	Treated SBM (II-2-77)	Treated SBM (III-1-5)	Treated SBM (IV-1-38)
Hexachlorobenzene	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
Hexachlorobutadiene	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
Hexachloroethane	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
Nitrobenzene	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
o-Cresol	<11	<11	120	70	25	<11	<12	<12	<12	<12
p-Cresol, m-Cresol (a)	<11	<11	220	110	99	<11	<12	<12	<12	<12
1,2-Dichlorobenzene	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
1,4-Dichlorobenzene	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
2,4-Dinitrotoluene	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
Pentachlorophenol	54	57	56	56	57	56	<61	<60	<61	<60
Phenol	<11	<11	270	120	49	<11	<12	<12	<12	<12
Pyridine	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12
2,3,4,6-Tetrachlorophenol	<110	<110	<110	<110	<110	<110	<120	<120	<120	<120
2,4,5-Trichlorophenol	54	52	56	56	57	<56	<61	<60	<61	<60
2,4,6-Trichlorophenol	54	52	<56	<56	<57	<56	<61	<60	<61	<60
bis(2-Chloroethyl)ether	<11	<11	<11	<11	<11	<11	<12	<12	<12	<12

(a) Isomers co-elute.

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TABLE 10. SURROGATE RECOVERIES FOR BNAS IN THE TCLP EXTRACTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Recovery, %									
	Blank	Untreated Waste Pile	Treated Waste Pile	Treated Tank Sludge	Treated Off-Site Area 1	Treated Off-Site Area 2	Treated SRM (I-1-14-19)	Treated SRM (II-2-77)	Treated SRM (III-1-5)	Treated SRM (IV-1-28)
2-Fluorophenol	98	76	92	86	102	87	57	70	80	46 (a)
Phenol-d5	99	78	87	83	101	95	NM (b)	72	76	145
Nitrobenzene-d5	81	73	88	82	88	90	84	91	91	96
2-Fluorobiphenyl	93	85	89	83	95	98	75	94	89	76
2,4,6-Tribromophenol	86	101	98	96	81	98	92	111	115	110
Terphenyl-d14	108	110	96	92	110	105	76	110	110	126

(a) Not within quality control limits.
NM Not measured due to the presence of an interfering ion.

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TABLE 4. PCB RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Concentration, ug/g (ppm)							
	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-19-19)	Untreated SRM (II-2-77)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-TA)
Aroclor-1016	<1.0	<2.0	<13	<0.1	<50	<5.0	<9.9	<5.0
Aroclor-1221	<1.0	<2.0	<13	<0.1	<50	<5.0	<9.9	<5.0
Aroclor-1232	<1.0	<2.0	<13	3.0	<50	<5.0	<9.9	<5.0
Aroclor-1242	15.0	2.6	151	<0.1	<50	<5.0	<9.9	<5.0
Aroclor-1248	<1.0	<2.0	<13	<0.1	<50	<5.0	<9.9	<5.0
Aroclor-1254	<1.0	<2.0	<13	<0.1	<50	<5.0	<9.9	<5.0
Aroclor-1260	36.0	4.2	124	5.4	<50	<5.0	<9.9	<5.0

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TABLE 49. SURROGATE RECOVERIES FOR PCBs IN THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Recovery, %							
	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-19-19)	Untreated SRM (II-2-77)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-38)
Dibutylchlorendate	NM	1877 (a)	2460 (a)	148	110280 (a)	11212 (a)	11183 (a)	41915 (a)
2,4,5,6-Tetrachloro-m-xylene	121	515 (a)	NM	297 (a)	NM	46	47	1 (a)

(a) Not within quality control limits, coelutes with a matrix interference believed to be pentachlorophenol.
NM Not measured, due to the presence of a matrix interference.

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TABLE 5. TCLP PCB RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Concentration, ug/L (ppb)									
	Blank (a)	Untreated Waste Pile	Treated Waste Pile	Treated Tank Sludge	Treated Off-Site Area 1	Treated Off-Site Area 2	Treated SRM (I-19-19)	Treated SRM (II-2-77)	Treated SRM (III-1-5)	Treated SRM (IV-1-38)
Aroclor-1016	<0.50	<5.0	5.0	<5.0	5.0	<5.0	<0.50	<0.50	<0.50	<0.50
Aroclor-1221	<0.50	<5.0	5.0	<5.0	<5.0	<5.0	0.50	<0.50	<0.50	<0.50
Aroclor-1232	<0.50	<5.0	5.0	<5.0	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50
Aroclor-1242	<0.50	<5.0	<5.0	<5.0	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50
Aroclor-1248	<0.50	5.0	5.0	5.0	<5.0	5.0	<0.50	0.50	0.50	<0.50
Aroclor-1254	0.50	5.0	5.0	<5.0	<5.0	<5.0	<0.50	0.50	<0.50	<0.50
Aroclor-1260	<0.50	<5.0	5.0	<5.0	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50

(a) Average of the analyses of three TCLP extracts.

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TABLE II. SURROGATE RECOVERIES FOR PCBs IN THE TCLP EXTRACTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Compound	Recovery, %									
	Blank	Untreated Waste Pile	Treated Waste Pile	Treated Tank Sludge	Treated Off-Site Area 1	Treated Off-Site Area 2	Treated SRM (I-19-19)	Treated SRM (II-2-77)	Treated SRM (III-1-5)	Treated SRM (IV-1-38)
Dibutylchlorendate	44	194	42	77	30	34	57	94	112	41
2,4,5,6-Tetrachloro-m-xylene	110	49	121	130	145	124	177	157	160	52

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TABLE a. METALS RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Analyte	Concentration, ug/g (ppm)								
	Untreated Waste Pile	Untreated Tank Sludge	Untreated Off-Site Area 1	Untreated Off-Site Area 2	Untreated SRM (I-19-19)	Untreated SRM (II-2-77)	Untreated SRM (III-1-5)	Untreated SRM (IV-1-38)	NBS Sludge
Silver	8.0	7.0	<0.8	<0.9	2.1	2.1	3.0	2.5	86
Arsenic	14	15	202	59	26	26	678	667	8.8
Beryllium	1.8	1.2	<0.09	<0.1	0.14	0.13	0.10	0.11	<0.1
Cadmium	7.0	10	1.8	1.6	22	22	880	880	17
Chromium	12	21	17	18	31	32	980	1000	160
Copper	23	60	56	15	220	250	7000	9000	940
Mercury	<0.03	<0.03	0.36	<0.03	<0.03	<0.03	<0.03	<0.03	9.5
Nickel	24	53	6.0	4.0	27	29	760	800	160
Lead	2800	23	1200	210	320	320	14200	12700	960
Antimony	<30	<30	<6	<6	<11	<6	<12	<6	<6
Selenium	<1.5	<1.5	<0.29	<0.27	<0.26	<0.26	0.3	<0.26	1.4
Thallium	<2.0	<2.0	<0.19	<0.18	<0.17	<0.18	<0.19	<0.17	<0.02
Zinc	35	550	140	44	410	460	18000	18000	1100

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TABLE 6QC. METALS RESULTS FOR THE EPA MUNICIPLE SLUDGE

Analyte	Concentration, ug/g (ppm)			
	Certified Values		Experimental Value	% Recovery
	Mean	Range		
Silver	80.6	0-203	86	107
Arsenic	17	0-88.0	8.8	52
Beryllium	0.277	0-2.99	<0.1	NC
Cadmium	20.77	2.49-39.1	17	82
Chromium	204.5	115-294	160	78
Copper	109[illegible]	831-1360	940	86
Mercury	16.3	0-36.1	9.5	58
Nickel	198	164-233	160	81
Lead	519	305-733	960	185
Antimony	NA	NA	<6	NC
Selenium	NA	NA	1.4	NC
Thallium	NA	NA	<0.02	NC
Zinc	1323	1190-1450	1100	83

NA Not available.
NC Not able to calculate.

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TABLE 7. TCLP METAL RESULTS FOR THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION SAMPLES.

Analyte	Concentration, mg/L (ppm)									
	Blank (a)	Untreated Waste Pile	Treated Waste Pile	Treated Tank Sludge	Treated Off-Site Area 1	Treated Off-Site Area 2	Treated SRM (I-19-19)	Treated SRM (II-2-77)	Treated SRM (III-1-5)	Treated SRM (IV-1-18)
Silver	<0.009	<0.009	0.025	0.020	0.028	0.023	0.018	0.032	0.022	0.026
Arsenic	0.002	0.005	0.002	0.003	0.034	0.008	0.003	0.003	0.078	0.32
Beryllium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	0.001
Cadmium	0.004	0.013	0.006	<0.003	0.007	0.006	0.064	0.12	15	24
Chromium	<0.009	<0.009	0.049	0.037	0.030	0.025	0.035	0.036	0.027	0.035
Copper	0.01	<0.01	0.01	0.01	0.07	0.03	0.05	0.07	2.3	32
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	<0.02	0.03	<0.02	<0.2	<0.02	<0.02	0.09	0.13	6.8	12
Lead	0.006	13	<0.002	0.021	<0.002	<0.002	<0.002	<0.002	11	33
Antimony	<0.06	<0.06	<0.01	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	0.2
Selenium	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.19	0.17	0.044	0.027	0.029	0.024	0.38	1.2	170	430

(a) Average of the analyses of three TCLP extract blanks.

TABLE 6. PCBs BY METHOD 608 RESULTS FOR PRELIMINARY SOLIDITECH SITE DEMONSATRATION SAMPLES.

Compound	Untreated Off -Site Area 1 (ug/g)
Monochlorinated biphenyls	<1
Dichlorinated biphenyls	<1
Trichlorinated biphenyls	15
Tetrachlorinated biphenyls	27
Pentachlorinated biphenyls	3.4
Hexachlorinated biphenyls	<1
Heptachlorinated biphenyls	<1
Octachlorinated biphenyls	<1
Nonachlorinated biphenyls	<5
Decachlorinated biphenyls	<5

TABLE 4. GMA RESULTS FOR THE REAGENT MIX USED DURING THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION TEST.

Compound	Concentration, ug/g (ppm)			
	Blank	Reagent Mix 3-35-1	Reagent Mix 3-35-2	Reagent Mix 3-35-3
Acenaphthalene	<1	<1	<1	<1
Acenaphthene	<1	<1	<1	<1
Acetophenone	<1	<1	<1	<1
2-Acetylaminofluorene	<25	<25	<25	<25
4-Aminobiphenyl	<25	<25	<25	<25
Aniline	<2	<2	<2	<2
Anthracene	<1	<1	<1	<1
Aramite	NA	NA	NA	NA
Benz(a)anthracene	<1	<1	<1	<1
Benzenethiol	NA	NA	NA	NA
Benzidine	NA	NA	NA	NA
Benzo(a)pyrene	<1	<1	<1	<1
Benzo(b)fluoranthene	<1	<1	<1	<1
Benzo(g,h,i)perylene	<1	<1	<1	<1
Benzoic acid (a)	NA	NA	NA	NA
Benzo(k)fluoranthene	<1	<1	<1	<1
p-Benzoquinone	NA	NA	NA	NA
Benzyl alcohol	<2	<2	<2	<2
bis(2-Chloroethoxy)ethane	<1	<1	<1	<1
bis(2-Chloroethyl)ether	<1	<1	<1	<1
bis(2-Chloroisopropyl)ether	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate	<1	<1	<1	<1
4-Bromophenyl phenyl ether	<1	<1	<1	<1
Butyl benzyl phthalate	<1	<1	<1	<1
2-sec-butyl-4,6-dinitrophenol	NA	NA	NA	NA
p-Chloroaniline	<20	<20	<20	<20
Chlorobenzilate	NA	NA	NA	NA
2-chloroethyl vinyl ether	NA	NA	NA	NA
p-Chloro-m-cresol	<1	<1	<1	<1
2-Chloronaphthalene	<1	<1	<1	<1
2-Chlorophenol	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	<1	<1	<1	<1
Chrysene	<1	<1	<1	<1
o-Cresol	<1	<1	<1	<1
p-Cresol	<1	<1	<1	<1
Dibenzofuran	<1	<1	<1	<1
Dibenz(a,h)anthracene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1

(continued)

TABLE 9. GMA RESULTS FOR THE REAGENT MIX USED DURING THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION TEST.

Compound	Concentration, ug/g (ppm)			
	Blank	Reagent Mix 3-35-1	Reagent Mix 3-35-2	Reagent Mix 3-35-3
1,4-Dichlorobenzene	<1	<1	<1	<1
3,3'-Dichlorobenzidine	<2	<2	<2	<2
2,4-Dichlorophenol	<1	<1	<1	<1
2,6-Dichlorophenol	<1	<1	<1	<1
Diethylphthalate	<1	<1	<1	<1
p-Diethylaminoazobenzene	NA	NA	NA	NA
3-3'-Dimethoxybenzidine	NA	NA	NA	NA
7-12-Dimethylbenz(a)anthracene	<2	<2	<2	<2
3,3'-Dimethylbenzidine	<5	<5	<5	<5
2,2-Dimethylphenethylamine	<25	<25	<25	<25
2,4-Dimethylphenol	<1	<1	<1	<1
Dimethylphthalate	<1	<1	<1	<1
1,3-Dinitrobenzene	<10	<10	<10	<10
2,6-Dinitro-o-cresol	<5	<5	<5	<5
2,4-Dinitrophenol	<5	<5	<5	<5
2,4-Dinitrotoluene	<1	<1	<1	<1
2,6-Dinitrotoluene	<1	<1	<1	<1
Di-n-butylphthalate	<1	<1	<1	<1
Di-n-octylphthalate	<1	<1	<1	<1
Di-n-propylnitrosamine	<1	<1	<1	<1
Diphenylamine	<1	<1	<1	<1
1,2-Diphenylhydrazine	<10	<10	<10	<10
Fluoranthene	<1	<1	<1	<1
Fluorene	<1	<1	<1	<1
Hexachlorobenzene	<1	<1	<1	<1
Hexachlorobutadiene	<1	<1	<1	<1
Hexachlorocyclopentadiene	<1	<1	<1	<1
Hexachloroethane	<1	<1	<1	<1
Hexachlorophene	NA	NA	NA	NA
Hexachloropropene	<1	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	<1	<1	<1	<1
Isophorone	<1	<1	<1	<1
Isosafrole	<10	<10	<10	<10
Methapyrilene	NA	NA	NA	NA
3-Methylcholanthrene	<10	<10	<10	<10
4,4-Methyl-bis(2-chloroaniline)*	NA	NA	NA	NA
Methyl methanesulfonate	<2	<2	<2	<2
2-Methylnaphthalene	<1	<1	<1	<1
Naphthalene	<1	<1	<1	<1

(continued)

TABLE 9. BNA RESULTS FOR THE REAGENT MIX USED DURING THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION TEST.

Compound	Concentration, ug/g (ppm)			
	Blank	Reagent Mix 3-35-1	Reagent Mix 3-35-2	Reagent Mix 3-35-3
1,4-Naphthoquinone	<20	<20	<20	<20
1-Naphthylamine	<10	<10	<10	<10
2-Naphthylamine	<10	<10	<10	<10
2-Nitroaniline	<5	<5	<5	<5
3-Nitroaniline	<5	<5	<5	<5
4-Nitroaniline	<5	<5	<5	<5
Nitrobenzene	<1	<1	<1	<1
2-Nitrophenol	<5	<5	<5	<5
4-Nitrophenol	<5	<5	<5	<5
N-Nitrosodi-n-butylamine	<5	<5	<5	<5
N-Nitrosodiethylamine	<5	<5	<5	<5
N-Nitrosodimethylamine	<5	<5	<5	<5
N-Nitrosodiphenylamine	<5	<5	<5	<5
N-Nitrosodimethylethylamine	<5	<5	<5	<5
N-Nitrosomorpholine	<5	<5	<5	<5
N-Nitrosopiperidine	<5	<5	<5	<5
N-Nitrosopyrrolidine	<5	<5	<5	<5
5-Nitro-o-toluidine	<5	<5	<5	<5
Pentachlorobenzene	<1	<1	<1	<1
Pentachloroethane	<1	<1	<1	<1
Pentachloronitrobenzene	<10	<10	<10	<10
Pentachlorophenol	<5	<5	<5	<5
Phenacetin	<10	<10	<10	<10
Phenanthrene	<1	<1	<1	<1
Phenol	<1	<1	<1	<1
2-Picoline	<5	<5	<5	<5
Pronamide	<10	<10	<10	<10
Pyrene	<1	<1	<1	<1
Pyridine	<1	<1	<1	<1
Resorcinol	NA	NA	NA	NA
Safrole	<10	<10	<10	<10
1,2,4,5-Tetrachlorobenzene	<10	<10	<10	<10
2,3,4,6-Tetrachlorophenol	<10	<10	<10	<10
1,2,4-Trichlorobenzene	<1	<1	<1	<1
2,4,5-Trichlorophenol	<5	<5	<5	<5
2,4,6-Trichlorophenol	<5	<5	<5	<5

(a) Benzoic acid was quantified using a response factor of 1.0.
NA Not available

TABLE 95. SURROGATE RECOVERIES FOR BNAs IN THE REAGENT MIX USED DURING THE PRELIMINARY SOLIDITECH SITE DEMONSTRATION TEST.

Compound	Recovery, %			
	Blank	Reagent Mix 3-35-1	Reagent Mix 3-35-2	Reagent Mix 3-35-3
2-Fluorophenol	90	7	22	7
Phenol-d5	93	23	51	23
Nitrobenzene-d5	83	91	80	85
2-Fluorobiphenyl	85	88	83	88
2,4,6-Tribromophenol	99	3	9	3
Terphenyl-d14	103	93	110	91

APPENDIX D

RESULTS OF FIELD EXPERIMENTS

Appendix D contains the results of several field experiments performed on treated waste during the Soliditech SITE demonstration. These experiments include the Slump of Portland Cement (ASTM C143) and the Sieve Test/Homogeneity of Mixing (a modification of ASTM C136 and C142) procedures.

APPENDIX D

LIST OF TABLES

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1	Slump Test of Treated Waste	D-1
2	Sieve Test	D-2

TABLE 1
SLUMP TEST
TREATED WASTE

1. Mixture of waste pile and sludge

Test 1 (Form 2)	5.25 inches*
Test 2 (Form 4)	3.0 inches

2. Waste pile

Test 1 (Form 5)	4.0 inches
Test 2 (Form 8)	6.0 inches
Test 3 (Form 10)	7.5 inches

3. Off-site soil

Test 1 (Form 11)	5.75 inches
Test 2 (Form 13)	5.25 inches
Test 3 (Form 14)	6.25 inches

* Height of material after removal from a 12-inch-high container.

TABLE 2
SIEVE TEST

1. Mixture of waste pile and sludge

Test 1 (Form 2): Weight of material, 7.66 pounds

Sieve Size	Waste Clump
3/4 inches	0.43 pounds*
1/2 inches	0.08 pounds
1/4 inches	0.08 pounds

Test 2 (Form 4): Weight of material, 10.72 pounds

Sieve Size	Waste Clump
3/4 inches	0.0 pounds
1/2 inches	0.06 pounds
1/4 inches	0.14 pounds

2. Waste pile

Test 1 (Form 5): Weight of material, 9.28 pounds

Sieve Size	Waste Clump
3/4 inches	0.0 pounds
1/2 inches	0.04 pounds
1/4 inches	0.12 pounds

Test 2 (Form 8): Weight of material, 10.38 pounds

Sieve Size	Waste Clump
3/4 inches	0.0 pounds
1/2 inches	0.16 pounds
1/4 inches	0.08 pounds

Test 3 (Form 10): Weight of material, 7.54 pounds

Sieve Size	Waste Clump
3/4 inches	0.0 pounds
1/2 inches	0.16 pounds
1/4 inches	0.08 pounds

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TABLE 2

SIEVE TEST
(Continued)

3. Off-site soil

Test 1 (Form 11); Weight of material, 12.12 pounds

Sieve Size	Waste Clump
3/4 inches	0.0 pounds
1/2 inches	0.06 pounds
1/4 inches	0.16 pounds

Test 2 (Form 13); Weight of material, 11.68 pounds

Sieve Size	Waste Clump
3/4 inches	0.016 pounds
1/2 inches	0.18 pounds
1/4 inches	0.041 pounds

Test 3 (Form 14); Weight of material, 12.26 pounds

Sieve Size	Waste Clump
3/4 inches	0.1 pounds
1/2 inches	0.1 pounds
1/4 inches	0.04 pounds

---

* Waste clump material initially retained on the screen and then passed through the screen after crushing it manually.

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APPENDIX E

PRC TRIP REPORT

Appendix E contains a trip report prepared by the EPA SITE contractor during the time period of the Soliditech SITE demonstration.

SOLIDITECH DEMONSTRATION CHRONOLOGY

Site Preparation

Obtain sampling and analysis equipment	December 1 and 2, 1988
Establish health and safety zones	December 2, 1988
Office trailer set-up	December 2 and 5, 1988
Setup decontamination areas	December 5 and 6, 1988
Accommodation of Soliditech equipment	December 5 and 6, 1988
Preparation for visitor's day	December 6, 1988
Waste collection	December 6 and 7, 1988

Operations

Arrival of Soliditech equipment	December 3, 1988
Set-up of the Soliditech equipment	December 5 and 6, 1988
Visitor's day/public viewing day	December 7, 1988
Waste material collection	
Off-Site Area One	December 6, 1988
Filter cake/oily sludge	December 6 and 7, 1988
Filter cake	December 7, 1988
Pretreatment sample collection	
Off-Site Area One	December 5, 1988
Filter cake/oily sludge	December 7, 1988
Filter cake	December 7, 1988
Waste treatment and post-treatment sampling	
Reagent mix/control run	December 6, 1988
Filter cake/oily sludge	December 7, 1988
Filter cake	December 7, 1988
Off-Site Area One	December 8, 1988
Clean-up activities	December 8 through 14, 1988

Sample Collection and Preparation of Long-Term Monitoring Area

Collection of treated waste samples	January 9, 1989
Removal of forms from treated waste monoliths	January 9, 1989
Placement of monoliths in long-term monitoring location	January 10, 1989

FIELD TRIP REPORT
FOR SOLIDITECH DEMONSTRATION

Tuesday, December 6, 1988

Haztech provided lighting and heating for the trailer shared by PRC, Radian, and Haztech personnel. In the morning (8:40 a.m.), a health and safety meeting was held inside the trailer. Attendees included personnel from PRC (Ken Partymiller, Mark Evans, Judy Papesh, and Shin Ahn), Soliditech, Haztech, and EPA (Walter Grube). Judy Papesh of PRC led the meeting. She stressed that anybody in the exclusion zone should wear, at a minimum, level D protective clothing.

Soliditech set up its two mixing units (a large mixer with a nominal capacity of 10 cubic yards and a small unit mixer with a capacity of 2 cubic yards) and prepared for start-up. A problem developed when Soliditech tried to transfer cement from the cement silo to a 55-gallon drum. Soliditech needed a 30-amp breaker for an air compressor motor to pressurize the silo interior, but the breaker on-site was only 20-amps. Soliditech tried to use a portable generator (27 amps), but it did not work. Later, the problem was solved by replacing the 20-amp breaker with a new 30-amp breaker. This problem delayed Soliditech's scheduled work for approximately one-half day.

Haztech excavated the waste material from Off-Site Area One using a backhoe/loader and a tracked front-end loader. Haztech sealed the dump truck gate with caulking and lined the dump truck bed with a double liner of 6-mil polyethylene sheeting to prevent leakage. The excavated material was loaded onto the dump truck and covered with the same polyethylene sheets. The dump truck bed was also covered with a standard bed cover as attached to all such trucks permitted to haul solid waste. The dump truck was transported to an off-site weighing station to determine the weight of the material. The net weight of the soil was 9,100 pounds. According to Rod Bruckdorfer of Soliditech, the waste material appeared to be less than 5 cubic yards. The dump truck was then driven on-site and parked near the demonstration area overnight.

Haztech weighed one empty 55-gallon drum and three 55-gallon drums of sludge using a scale on-site. The sludge had been collected from a sludge storage tank on the previous day. Relevant information on a scale is as follows:

Weight - Tronix
Model DS10

Capacity: 10,000 pounds
Size: 48" x 48"
Accuracy: ± 0.1 percent of applied load

PRC observed this weighing activity. The weights of drums were as follows:

Empty drum	58 pounds	
Drum 1	504 pounds gross,	446 pounds net
Drum 2	486 pounds gross,	428 pounds net
Drum 3	494 pounds gross,	436 pounds net

Haztech also collected four drums of waste material from the sludge filter cake pile.

Soliditech weighed a 55-gallon drum containing cement to calibrate the bucket of the loader. Soliditech used this bucket to determine the amount of cement added to the mixer. The weight was 500 pounds gross or 442 pounds net. This resulted in the bucket of the front end loader holding 938 pounds of cement.

Soliditech began to treat sand with reagents using its smaller unit (4:20 p.m.). Soliditech added sand, cement, water, Urrichem, and additives to the mixer unit, mixed all ingredients, and then discharged the treated product into a 1-cubic-yard plywood form designated as form No. 1.

Soliditech was reluctant to be closely observed by PRC because of the potential release of confidential information such as the type and amount of additives used. Rod Bruckdorfer stated that he will give PRC the necessary process information. Therefore, PRC was unable to check all of the ingredients added to the mixer unit. Later, Rod Bruckdorfer gave PRC the following information regarding the sand treatment.

Sand	800 pounds
Cement	442 pounds
Urrichem	9.4 pounds/0.8 gallon
Additives	16.5 pounds
Water	18.5 gallons
Total Mixing Time	45 minutes

PRC observed and confirmed the weights of sand and cement added and the operating time. The sand was in 100-pound bags made by Atlanta Sand & Supply Company. Radian took samples of sand, the reagent mix, and treated product. The plywood form containing the product was stored overnight in the on-site building at 72° F.

Haztech reinforced the forms with three or four 5/8-inch metal bands.

Wednesday, December 7, 1988

PRC was on-site at 7:00 a.m. Haztech had installed a decontamination pad overnight. The decontamination pad consisted of four layers of 6-mil polyethylene liner over a 15- by 20-foot area with a small sump and pump. The curb surrounding the area was an 8-inch diameter boom.

Soliditech weighed three drums containing waste pile material. PRC observed this activity. The weight of the drums were as follows:

Drum 1	390 pounds net
Drum 2	470 pounds net
Drum 3	460 pounds net

Soliditech collected and supplied to Radian residual material from its large mixing unit. They then scraped and steam cleaned the mixing unit. Soliditech also calibrated the front-end loader bucket with two drums of the waste pile material to determine the weight in each bucket. The net weight of material in each front-end loader bucket was 930 pounds.

Soliditech began processing the first batch of material on its large mixer unit. The material consisted of six drums of waste pile material (2,640 pounds net based upon 440 pounds per drum average) and three drums of sludge (1,310 pounds net). Radian took pretreatment samples directly from the mixing unit.

Soliditech again calibrated the loader bucket using two drums of cement. Each front-end loader bucket of cement weighed 938 pounds. Soliditech added six buckets (5.3 full buckets) of cement into the mixing unit. According to Rod Bruckdorfer, Soliditech added 139 pounds of additives and 39 pounds of Urrichem. The mixing unit was continuously operated while adding all ingredients. At 11:10 a.m., the treated product began to discharge from the mixer unit into three 1-cubic-yard plywood forms (No. 2, 3, and 4). Each block of treated material in the form was sequentially numbered with monument markers. Radian took samples of treated product from the plywood forms.

During this operation, approximately 55 visitors showed up to observe the process as part of the planned public demonstration. Mark Evans of PRC acted as community relations coordinator for the demonstration.

PRC conducted on-site slump tests and sieve analyses of the treated product. Radian obtained two samples from plywood forms No. 2 and No. 4 for these tests (see Table 1 and Table 2 for results). After the tests were conducted, PRC collected the test material in a hazardous waste drum for disposal. After treating the material, Soliditech began to decontaminate its large mixing unit (11:45 a.m.). It took approximately 1 hour to complete the decontamination activity.

After completing the decontamination, Soliditech began to process the waste pile material (filter cake) at 1:00 p.m. According to Rod Bruckdorfer, the following materials were added to the mixer unit.

Filter cake	11,160 pounds
Additives	167 pounds
Urrichem	9.9 gallons
Water	370 gallons
Cement	4,925 pounds

The treated products began to discharge into six plywood forms at 3:50 p.m. These forms were numbered Nos. 5, 6, 7, 8, 9, and 10.

Plywood forms No. 3 (waste pile and sludge mixture) and No. 7 (waste pile) were placed in the on-site building for overnight storage at 72° F. Form No. 1 (sand) was taken out of the building and stored outside.

After processing the waste pile material, Soliditech did not decontaminate its process mixer and Soliditech began to add off-site soil material into the mixer (4:40 p.m.). Radian took pretreatment samples from the mixer.

Soliditech added Urrichem, additives, and water into the mixer. Rod Bruckdorfer stated that Soliditech would add cement tomorrow.

Thursday, December 8, 1988

The site activities began at 8:00 a.m. Haztech cleaned up unused off-site soil near the waste pile and put the soil into 55-gallon drums.

At 9:35 Soliditech added approximately 4.8 front-end loader buckets (4540 pounds) of cement to the large mixer unit which already contained Off-Site Area One soil, Urrichem,

additives, and water. The mixing unit began to discharge the treated product into plywood forms at 10:00 a.m. Four plywood forms (Nos. 11, 12, 13, and 14) were filled with treated product.

The following information was given to PRC by Rod Bruckdorfer.

Off-Site soil	9100 pounds
Additives	136.5 pounds
Urrichem	8.12 gallons
Cement	2.27 tons
Water	220 gallons

PRC conducted on-site slump tests and sieve analyses for three replicate samples taken by Radian from plywood forms 11, 13, and 14. The results of these tests are in Tables 1 and 2. After completing the off-site soil treatment, Soliditech began to decontaminate its equipment at 11:00 a.m.

APPENDIX F

SOLIDITECH DOCUMENTATION OF FIELD REPORTS

Appendix F contains a letter prepared by Soliditech which documents the amounts of waste, proprietary reagent, proprietary additives, and cement used by Soliditech during the SITE demonstration.

APPENDIX F

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SOLIDITECH, INC.
6901 CORPORATE DR., SUITE 215
HOUSTON, TEXAS 77036

TELEPHONE: 7137784800

21 March 1989

Ken Partymiller
PRC Engineering
10716 Whisperwillow
The Woodlands, Texas 77380

RE: Imperial Oil SITE Waste Treatment Mass Balance

Dear Dr. Partymiller:

I reviewed Shin Ahn's field notes and compared them to my field notes. Except for a few cases, the numerical data is in agreement with my data. I have marked those differences for your review - see attachments.

I updated the field formula data after reviewing my notes, Table 1. This information is basically the same as previously supplied. I still can not account for the mass difference between the calculated and measured slurry weights. This difference is probably a result of the method used to weigh the cement and waste and the amount of treated waste left in the mixer. I estimated the weight and mixer errors to determine their effect on the mass balance.

The weighing error for each bucket (front-end loader) of cement was estimated from the field formula data, Table 1. The material quantities in the COTREATMENT formula, except for the cement, are known, therefore, the assumption was made the difference in mass balance was a direct result of the cement weighing error. The weighing error per bucket load of cement was calculated from the calibrated weight of one bucket load of cement (938 lb):

mass balance difference = 656 lb (COTREATMENT)

bucket loads cement = ~5.3

$$\text{weighing error per bucket} = \frac{656 \text{ lb}}{5.3 \text{ buckets}}$$

= ~124 lb/bucket

$$\text{percent error/bucket} = \frac{124 \text{ lb/bucket}}{938 \text{ lb/bucket}} \times 100$$

$$= 13 \text{ wt\%}$$

The measured bulk density of the cement delivered from the silo was ~ 87 lb/cu ft, therefore:

$$124 \text{ lb cement} = \sim 1.4 \text{ cu ft.}$$

This magnitude of weighing error is possible considering the method used to weigh cement. If we assume this error is reasonable, the weighing error for the WASTE PILE can be estimated:

buckets of cement = ~5.25 loads

cement error = 5.25 buckets X 124 lb/bucket

= ~650 lb

mass balance difference = 3,341 lb. (Table 1.)

The possible error associated with the weight of the WASTE PILE is estimated by subtracting the cement error from the mass balance difference:

error assumed for waste = 3,341 lb - 650 lb

= ~2690 lb

buckets of waste = 12

$$\text{error per bucket load} = \frac{2690 \text{ lb}}{12 \text{ buckets}}$$

= ~224 lb/bucket

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$$\text{estimated wt\% error} = \frac{224 \text{ lb/bucket}}{930 \text{ lb/bucket}} \times 100$$

$$= 24 \text{ wt\%}$$

(930 lb/bucket is the WASTE PILE quantity used to calibrate the front-end-loader bucket).

A similar calculation for the OFF-SITE AREA #1 treatment shows a higher wt% error. Subtracting the estimated cement error from the mass difference yields 3,365 lb attributed to the waste. Dividing this by the waste weight:

$$\text{estimated wt\% error} = \frac{3365 \text{ lb}}{9100 \text{ lb}} \times 100$$

$$= 37 \text{ wt\%}.$$

The estimated error for the WASTE PILE and OFF-SITE AREA #1 is relatively large compared to the estimated cement error, therefore, probably unrealistic. Further, the difference between the error for the two waste streams is also large, which suggest an inconsistency in the weighing procedure and/or another source of error. Since we do not have the truck weight ticket, the reported weight of OFF-SITE AREA #1 waste may be incorrect. In addition, all the OFF-SITE AREA #1 waste may not have been transferred to the mixer. Both of these sources of error could account for the large OFF-SITE AREA #1 weighing error, as well as, the large difference in the wt% error between the two waste streams. In addition to the above sources of error, the amount of treated waste left in the mixer was unknown.

For the purpose of this discussion, the slurry volume associated with the mass balance difference was calculated. The measured density of the solidified WASTE PILE and the OFF-SITE AREA #1 was 12.5 lb/gal and 13.8 lb/gal, respectively. As shown in Table 2, the calculated percent mixer volume for the WASTE PILE and OFF-SITE AREA #1 mass balance difference are about equal. A possible implication is that the same amount of slurry was left in the mixer. Although a 13 or 14 % slurry volume retention is unrealistically high for a 10 cu yd mixer, a value of 5% (0.5 cu yds) is probably more realistic considering the surface area of

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mixing tank. Further, if we assume a 10 wt % weighing error based on the estimated cement weighing error, a theoretical weight and volume correction can be applied to the formula data, Table 3.

As shown in Table 3, the corrected mass balance difference for the WASTE PILE (471 lb) is about 3 wt% of the measured weight of the solidified material, whereas, OFF-SITE #1's calculated mass difference (2,468 lb) is about 21 wt% of the actual weight. Since we suspect all of the weighed OFF-SITE AREA #1 was not transferred to the mixer, assume the front-end loader missed about 10 wt% during the transfer operation (910 lb) - about one front-end loader bucket. Subtracting 910 lbs from the total pounds corrected mass balance equals a final mass balance difference of 1,558 lb, which represents about 13 wt% of the solidified mass. This is about 4 factors larger than that calculated for the WASTE PILE. This difference either suggests the assumptions are wrong or the information from the weight ticket (OFF-SITE AREA #1) was incorrectly reported. Another possibility is an unaccounted source of error. (It is interesting to note, the OFF-SITE AREA #1 formula had the highest estimated waste weighing error at 37 wt%.)

In either case, the theoretical calculations may not provide definitive answers but they help support the theory that the large difference in the mass balance between the formula wights and actual solidified mass was most probably caused by errors in weighing cement and waste, transferring AREA #1 waste to the mixer and accounting for retained slurry in the mixer.

Sincerely,

Rod Bruckdorfer

Rod Bruckdorfer
(713) 520-1495

cc: Bill Stallworth
Carl Brassov
Herve Tricot
Terri Healy

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BLE 1.
TA

WASTE TREATMENT FIELD FORMULAS, EPA IMPERIAL OIL
S.I.T.E. PROGRAM
12/5/88 - 12/9/88

	CONTROL TEST FORMULA	COTREATMENT FORMULA*	WASTE PILE FORMULA	OFF-SITE AREA #1
TE (lb)	800	3,950	11,160	9,100
WA ader buckets	N/A	N/A	12	N/A
E II CEMENT (lb)	442	4,971	4,925	4,502
TY ader buckets	N/A	5.3	5.25	4.8
ICHEM (gal)	0.8	3.5	9.9	8.1
UR (lb)*	9.0	39.2	110.9	90.7
ITIVES (lb)	16.5	139.7	167.0	136.5
ER (gal)	18.5	80.0	370.0	220.0
WA (lb)*	154	666	3,078	1,830
AL (lb calc)	1,421	9,766	19,441	15,660
TO				
AL (lb meas)	1,330	9,110	16,100	11,700
TO				
ference (lb)	(91)	(656)	(3,341)	(3,960)
Di				

N/A = Not Applicable

a. Cotreatment waste was composed of 2,640 lb waste pile and 1,310 lb abandoned tank material.

b. URRICHEM density is 11.2 lb/gal.

c. Conversion factor for water is 8.32 lb/gal.

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Table 2.

SLURRY VOLUME BASED ON MASS BALANCE DIFFERENCE

Waste Material Source	Mass Balance Difference (lb)	Density (lb/gal)	Calc Volume	Percent Mixer Volume [a]
CONTROL	91	13.9	0.9 cu ft	2
COTREATMENT	656	14.3	0.2 cu yd	2
WASTE PILE	3,341	12.5	1.3 cu yd	13
OFF-SITE #1	3,960	13.8	1.4 cu yd	14

a. Mixer volumes for the small and large Maxon mixer were 2 cu yds and 10 cu yds.

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Table 3.

WASTE TREATMENT FORMULAS EPA IMPERIAL
OIL S.I.T.E. PROGRAM
CORRECTED SLURRY DATA

MATERIALS & CHEMICALS	WASTE PILE	OFF-SITE AREA #1
Retained Slurry (lb) (mixer)	0	1,262
WASTE (lb)	11,160	9,100
~ loader buckets	12	N/A
TYPE II CEMENT (lb)	4,925	4,502
~ loader buckets	5.25	4.8
URRICHEM (gal)	9.9	8.1
(lb)*	110.9	90.7
ADDITIVES (lb)	167.0	136.5
WATER (gal)	370.0	220.0
(lb)*	3,078	1,830
TOTAL (lb calculated)	19,441	16,922
CEMENT WT ERROR	(493)	(450)
WASTE WT ERROR*	(1,116)	(910)
WT RETAINED MIXER	(1,262)	(1,393)
TOTAL (lb Corrected)	16,571	14,168
TOTAL (lb measured)	16,100	11,700
Mass Difference (lb)	471	2,468
OFF-SITE AREA # not Transferred to mixer (estimated at 10 wt%)	0	(910)
Corrected Mass Balance	471 lb	1,558 lb

a. URRICHEM density is 11.2 lb/gal. N/A = Not Applicable

b. Conversion factor for water is 8.32 lb/gal.

c. Measured density of the WASTE PILE and OFF-SITE AREA # 1 was 12.5 lb/gal and 13.8 lb/gal, respectively.

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APPENDIX G

PRELIMINARY WILT RESULTS

Appendix G contains the WILT leaching results for the first 16 weeks (8 leachate collections) of this experiment. The WILT test is scheduled to continue for a total period of six months to one year. This appendix contains the preliminary results.

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EXCERPTS FROM

DEMONSTRATION PLAN

FOR THE SOLIDITECH, INC.

SOLIDIFICATION PROCESS

APPENDIX G

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APPENDIX G

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WASTE INTERFACE LEACHING TEST (WILT)

The purpose of the Soliditech process is to reduce the leachability of treated waste to a level required to protect ground-water resources if the solidified material is placed in a landfill. Laboratory leaching tests may be used to evaluate the leachability of treated waste, but they may not accurately predict long-term leaching behavior. The Waste Interface Leaching Test (WILT) is designed to evaluate the long-term leaching behavior of a solidified waste. This test is designed to simulate dynamic leaching of a column of solidified waste. The columns are constructed in polyethylene containers and can be maintained in an indoor environment (Jackson, 1988).

Experimental Design

The experimental design for the waste interface leaching test will consist of leaching two sizes of solidified cast cylinders (3" x 18" and 6" by 18") from each of three types of solidified material. Three replicate cast cylinders will be leached representing each size and type of cast cylinder, resulting in a total of 18 leaching columns.

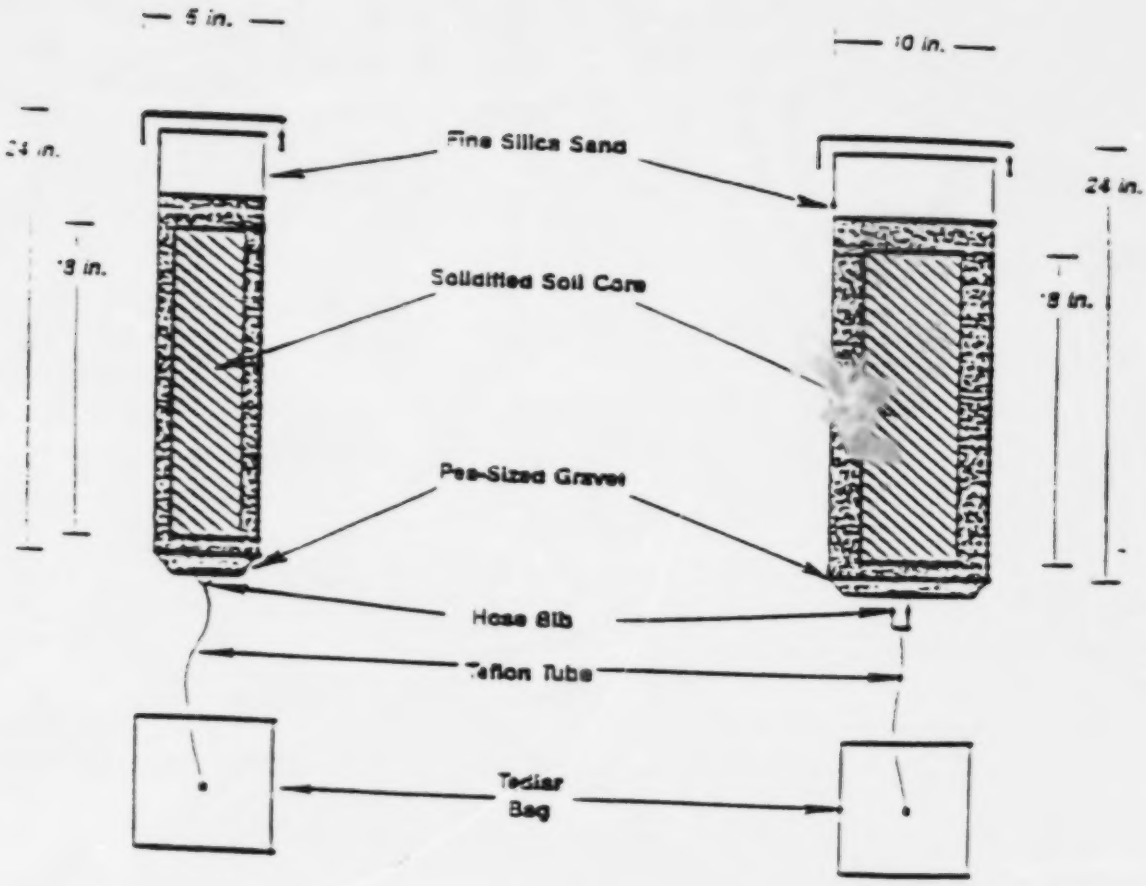
Leachate from each cast cylinder will be collected at intervals of 2, 4, 6, 8, 12, 16, 20, and 24 weeks after the 28-day curing period. The experiment may be continued if significant concentrations of analytes are detected at the end of 24 weeks. Leachate will be analyzed for pH, metals, and PCBs.

Procedure

The assemblies used to contain the stabilized waste for the 3-inch and 6-inch diameter and collect leachate cast cylinders are depicted in the figure. The high-density polyethylene tanks used to contain the stabilized soil are commercially available. The tanks, with dimensions of 5 or 10 inches in diameter and 24 inches in height, are constructed with a 20-degree conical bottom and a hollow threaded fitting at the apex to facilitate complete drainage. A small mesh fiberglass screen will be placed over the drainage hole in the bottom of the tanks, and a 0.25-inch diameter hose couple will be mounted in the threaded fitting to facilitate the attachment of a Tedlar bag for leachate collection. Each tank will be secured in an upright position with a fitted metal stand.

Acid-washed, pea-sized gravel, will be placed in each tank in quantities sufficient to fill the conical portion of the tank bottom. A 1-inch layer of acid washed sand will be placed in the

FIGURE 1
DIAGRAM OF LEACHING COLUMNS DESIGNED FOR LONG-TERM EVALUATION OF SOLIDIFIED WASTE



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tanks on top of the gravel. This sand-gravel layer will serve as a pre-filter for leachate coming from waste in the tanks to minimize particulate migration into the collection bags.

Cast cylinders of solidified waste will be prepared by packing freshly-mixed slurry into plastic pipe sections which have one end sealed. Nine plastic pipe section with dimensions of 3 inches i.d. x 18 inches length, and nine with dimensions of 6 inches i.d. x 18 inches length will be filled with wet slurry. After 28 days of curing, each solidified cast cylinder will be removed from the plastic pipe mold and placed into a leaching column according to the following procedure.

Each stabilized case cylinder will be placed into individual leaching columns and the annular space between the cast cylinder and the container will be filled with acid-washed sand. Stabilized case cylinders will be either 3 or 6 inches in diameter and 18 inches in length. The 3- and 6-inch diameter cast cylinders will be placed in 5- and 10-inch diameter tanks, respectively. A 1-inch layer of acid-washed sand will be added to the top of the filled tanks to disperse water uniformly over the cross-section area of the stabilized soil.

A 0.25-inch diameter teflon tube will be connected to the hose-bib at the base of each column with the opposite end fitted to a 3-way stopcock. A second tygon tube will be connected to stopcock and a fitting on sealed Tedlar bags. This arrangement will allow leachate from the columns to flow into the Tedlar bags and facilitate sampling of leachate in the bags without exposing it to the atmosphere.

Leaching fluid (distilled water) will be supplied through the bottom of each column through tubing connected to a water reservoir. Deionized water will be added to fully saturate each column to the surface level of the sand packing. The columns will remain saturated until leachate is collected at the predetermined time intervals. Biweekly leachate collection will be made for a period of 6 months to one year. The water from the columns will be drained into Tedlar bags.

Leachate will be withdrawn from the Tedlar bags with a disposable syringe or by exerting positive pressure on the bags. A sealed vessel will be used to determine pH of Eh of each leachate sample immediately after it is withdrawn from the Tedlar bag. Leachate will be analyzed for pH, metals, and PCBs using standard EPA methods.

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Expected Results

Results of this long-term leaching test will provide data which can be used to construct analyte concentration profiles in terms of liquid to solid ratio or the time of leaching. Results of this test will also provide a measure of the total analytes leached over the entire leaching time. These results can be compared to those obtained from both static and batch leaching tests performed in the laboratory.

REFERENCES

Jackson, D.R., 1988. Comparison of Laboratory Batch Methods and Large Columns for Evaluating Leachate from Solid Wastes. Prepared for U.S. EPA, RREL, Cincinnati, Ohio, Final Report.

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PRELIMINARY WILT DATA
FOR
THE SITE DEMONSTRATION OF
SOLIDITECH, INC.
SOLIDIFICATION TECHNOLOGY

Prepared for:

U. S. Environmental Protection Agency
Risk Reduction Engineering Laboratory
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July 26, 1989

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TABLE 1 RESULTS FOR LARGE COLUMN WILT TEST - FIRST LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<0.4	<0.4	<0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1221	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1232	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1242	<0.4	<0.4	<0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1248	<0.4	<0.4	<0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1254	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1260	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	3.5	3.5	4.9	1.5	1.9	0.5	4.0	4.0	3.7
As	0.11	0.14	0.13	0.027	0.024	0.023	0.008	0.009	0.009
Ba	0.25	0.26	0.26	1.6	1.5	0.88	0.77	0.74	0.75
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	91	89	90	720	590	540	200	180	190
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.07	0.09	0.09	0.03	0.02	0.03	<0.02	<0.02	<0.02
Hg	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Na	250	300	290	220	200	140	140	140	130
Ni	0.03	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	0.009	0.008	0.007	<0.004	0.004	<0.004	<0.004	0.004	<0.004
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	14	16	14	3.2	3.7	3.7	0.6	0.6	0.7
TOC (mg/L)	180	190	200	150	160	130	49	41	48
TDS (mg/L)	3400	3600	3700	3800	3300	2900	1200	1200	1200
Eh (mv)	140	130	150	184	155	160	104	111	112
pH (pH units)	11.9	11.9	12.0	11.5	11.5	11.0	11.9	11.8	11.7

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

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TABLE 2. RESULTS FOR SMALL COLUMN WILT TEST - FIRST LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	2.5	2.4	5.0	2.6	3.4	1.0	4.4	4.1	5.1
As	0.85	0.12	0.11	0.018	0.014	0.021	0.010	0.010	0.011
Ba	2.6	3.0	0.5	2.2	2.2	0.8	2.2	2.0	1.0
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	530	570	170	660	580	570	340	330	330
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.12	0.14	0.09	<0.02	<0.02	0.04	<0.02	<0.02	<0.02
Hg	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Na	250	310	330	160	140	150	250	200	210
Ni	0.05	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	0.006	0.009	0.007	<0.004	<0.004	<0.004	0.005	0.006	0.004
Tl	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS (mg/L)	4500	5300	4500	3100	2700	2900	2200	1800	1700
Eh (mv)	68	69	62	79	108	127	41	-60	30
pH (pH units)	12.2	12.3	12.1	11.8	11.8	11.2	12.1	11.9	12

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

TABLE 3. RESULTS FOR LARGE COLUMN WILT TEST - SECOND LEACHATE.

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs	<0.4	<0.4	<0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1016	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1221	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1232	<0.4	<0.4	<0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1242	<0.4	<0.4	<0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1248	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1254	<0.8	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1260									
Metals									
	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Ag	2.9	3.3	3.5	1.6	2.0	0.6	3.4	3.0	3.5
Al	.038	0.038	0.036	0.01	0.01	0.011	0.006	0.007	0.006
As	0.26	0.34	0.37	1.1	1.5	0.53	0.54	0.57	0.52
Ba	.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Be									
	110	130	160	360	450	260	130	120	120
Ca	.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cd	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cr	<0.02	<0.02	<0.02	0.04	0.03	<0.02	<0.02	<0.02	<0.02
Cu	.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Hg									
	84	110	87	78	130	55	79	75	73
Na	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Ni	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Sb	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se									
	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zn									
Other Tests									
O & G (mg/L)	2.7	3.6	3.1	<0.4	<0.5	<0.4	<0.5	<0.6	<0.4
TOC (mg/L)	60	79	74	61	51	49	28	20	17
TDS (mg/L)	1400	1800	1600	2300	3000	1800	780	770	690
Eh (mv)	153	179	129	153	144	144	139	132	112
pH (pH units)	11.5	11.7	12.1	11.3	11.5	10.9	11.9	12.5	11.7

Note: Data preceed by the < sign indicate the detection limit for the parameter in a given sample.

Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

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TABLE 4. RESULTS FOR SMALL COLUMN WILT TEST - SECOND LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	1.6	1.3	4.2	2.9	3.5	1.5	4.2	4.3	4.8
As	0.058	0.077	0.054	0.012	0.011	0.015	0.008	0.008	0.009
Ba	2.9	3.1	0.9	2.0	2.0	0.7	2.0	2.1	0.9
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	490	540	280	470	440	390	270	280	170
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.1	0.06	0.03	0.04	<0.02	<0.02	<0.02	<0.02	<0.02
Hg	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Na	180	190	140	88	79	87	140	170	140
Ni	0.03	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	0.005	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC (mg/L)	190	200	120	81	62	89	52	50	35
TDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Eh (mv)	143	152	119	146	138	155	140	146	141
pH (pH units)	12.1	12.1	11.7	11.2	11.4	11.0	11.7	11.9	11.6

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.

Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

NA Not analyzed.

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TABLE 5. RESULTS FOR LARGE COLUMN WILT TEST - THIRD LEACHATE.

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.03	<0.03	<0.03	<0.03 R	<0.03	<0.03	<0.03	<0.03	<0.03
Al	3.7	3.7	4.0	2.0	2.7	1.7	4.4	4.6	4.0
As	0.020	0.023	0.022	0.008 R	0.010	0.006	0.006	0.007	0.005
Ba	0.31	0.35	0.39	1.2	1.1	0.38	0.48	0.65	0.45
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	110	130	150	340	310	190	110	120	-
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	100
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.005
Cu	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.02
Na	50	65	53	64	80	36	73	110	<0.0002
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	64
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.05
Se	<0.002	<0.002	<0.002	<0.002 R	<0.002	<0.002	<0.002	<0.002	<0.2
Tl	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.004	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.004
Other Tests									
O & G (mg/L)	2.2	3.1	3.6	<0.4	<0.4	<0.4	<0.4	<0.4	<0.02
TOC (mg/L)	41	30	17	49	55	29	17	20	<0.4
TDS (mg/L)	1100	1300	1200	1800	1800	1100	710	910	14
Eh (mv)	158	169	160	140	145	140	138	135	620
pH (pH units)	11.9	11.5	11.6	11.7	11.5	11.0	11.5	11.6	137
									11.5

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.
R Indicates that the matrix spike recovery for this analyte is not within the acceptance limits of 80-100% recovery.

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TABLE 6. RESULTS FOR SMALL COLUMN WILT TEST - THIRD LEACHATE.

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	1.7	1.4	3.8	3.0	3.2	2.0	3.3	3.6	4.6
As	0.047	0.052	0.038	0.008	0.007	0.01	0.003	0.003	0.006
Ba	2.8	3.2	1.1	1.8	1.7	0.63	1.6	1.3	0.6
Be	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	490	540	290	400	360	320	240	200	130
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.04	0.08	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	130	140	94	70	59	65	90	100	110
Ni	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	9	11	6.9	<2	<1	<1	<1	<2	<1
TOC (mg/L)	140	150	100	46	44	57	22	39	25
TDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Eh (mv)	140	138	-60.2	157	160	156	150	161	155
pH (pH units)	12.7	12.2	12.2	12.2	12.0	11.5	12.1	12.3	12.1

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

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TABLE 7. RESULTS FOR LARGE COLUMN WILT TEST - FOURTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aroclor-1221	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aroclor-1248	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aroclor-1254	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.003	<0.03	<0.03	<0.03	<0.03
Al	3.2	3.5	3.4	2.1	2.4	1.8	4.4	4.0	3.5
As	0.020	0.027	0.024	0.008	0.009	0.007	0.007	0.007	0.005
Ba	0.34	0.45	0.46	1.0	1.0	0.37	0.40	0.42	0.36
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	100	130	140	280	270	160	87	85	76
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	<0.02	0.03	0.03	<0.02	0.03	<0.02	<0.02	<0.02	<0.02
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	40	62	46	52	76	33	76	68	53
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	2.0	2.2	2.0	<0.5	<0.6	<0.4	<0.4	<0.4	<0.4
TOC (mg/L)	28	42	45	37	51	29	13	11	9.3
TDS (mg/L)	960	1300	1200	1600	1700	960	670	710	600
Eh (mv)	150	125	150	135	125	145	150	150	160
pH (pH units)	11.6	11.5	11.6	11.7	11.6	11.1	11.5	11.5	11.4

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

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TABLE 8. RESULTS FOR SMALL COLUMN WILT TEST - FOURTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Only Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<0.9	<0.9	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0	<1.0
Aroclor-1221	<1.8	<1.8	<1.8	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0
Aroclor-1232	<1.8	<1.8	<1.8	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0
Aroclor-1242	<0.9	<0.9	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0	<1.0
Aroclor-1248	<0.9	<0.9	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0	<1.0
Aroclor-1254	<1.8	<1.8	<1.8	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0
Aroclor-1260	<1.8	<1.8	<1.8	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	1.1	1.4	3.6	2.7	2.7	2.0	3.1	3.5	4.8
As	0.048	0.044	0.040	0.009	0.008	0.012	0.005	0.006	0.010
Ba	2.9	2.6	1.4	1.7	1.6	0.73	1.4	1.2	0.48
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	510	470	300	380	310	340	200	160	87
Cd	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.03	0.04	0.04	0.04	<0.02	0.03	<0.02	<0.02	<0.02
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	120	110	110	76	57	77	110	160	180
Ni	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.02 E	<0.02 E	<0.02 E	<0.002	<0.002	<0.002	<0.002	<0.002 R	<0.002
Tl	<0.1	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC (mg/L)	150	5.5	100	51	38	2	22	26	25
TDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Eh (mv)	135	150	~ 100	120	150	149	140	140	145
pH (pH units)	12.1	12.1	12.0	11.7	11.7	11.4	11.9	11.9	11.9

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.

Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

NA Not analyzed.

E The reported value is estimated due to the presence of matrix interferences.

R Indicates that the matrix spike recovery for this analyte is not within the acceptance limits of 80-100% recovery

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TABLE 9. RESULTS FOR LARGE COLUMN WILT TEST - FIFTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	2.5	3.0	3.1	2.1	2.2	1.8	3.9	3.3	3.7
As	0.017	0.027	0.024	0.007	0.008	0.006	0.006	0.006	0.006
Ba	0.32	0.51	0.51	0.94	0.87	0.34	0.34	0.34	0.36
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	83	140	140	260	230	150	75	76	76
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.04	0.04	0.05	0.04	0.04	0.03	0.04	0.04	0.03
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	34	56	47	51	59	31	66	56	58
Ni	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	0.4	1	1	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
TOC (mg/L)	23	44	41	32	39	20	12	8.9	10
TDS (mg/L)	730	1200	1100	1600	1500	960	560	530	530
Eh (mv)	153	135	170	130	150	160	180	140	135
pH (pH units)	11.5	11.4	11.5	11.4	11.3	11.0	11.4	11.2	11.3

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

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TABLE 10. RESULTS FOR SMALL COLUMN WILT TEST - FIFTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	1.4	1.1	2.6	2.3	2.4	1.8	2.3	2.4	3.0
As	0.037	0.046	0.037	0.005	0.006	0.007	0.003	0.003	0.005
Ba	2.5	2.9	1.4	1.3	1.4	0.49	1.1	0.91	0.43
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	460	520	290	300	280	230	170	150	94
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.04	0.05	0.04	<0.02	<0.02	0.03	0.03	<0.02	0.04
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	88	84	77	45	47	45	87	77	85
Ni	0.03	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	5.5	6.6	5.8	<1	<1	<1	<1	<1	<1
TOC (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS (mg/L)	2400	2600	2000	1500	1600	1500	780	900	980
Eh (mv)	171	133	100	130	120	140	130	135	140
pH (pH units)	12.0	12.4	10.8	11.8	11.9	11.7	12.1	12.1	12.0

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

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TABLE 11. RESULTS FOR LARGE COLUMN WILT TEST - SIXTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aroclor-1221	<1.0	<1.0	<1.0	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0
Aroclor-1232	<1.0	<1.0	<1.0	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0
Aroclor-1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aroclor-1248	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aroclor-1254	<1.0	<1.0	<1.0	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0
Aroclor-1260	<1.0	<1.0	<1.0	<0.9	<1.0	<1.0	<0.9	<0.9	<1.0
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	1.1	2.8	2.9	2.2	2.3	1.6	3.2	3.2	2.8
As	0.001	0.024	0.025	0.007	0.007	0.006	0.006	0.006	0.006
Ba	0.14	0.49	0.63	0.74	0.74	0.29	0.27	0.29	0.26
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	35	120	160	210	200	140	62	66	62
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.02	0.03	0.03	0.02	0.02	0.03	0.03	0.02	<0.02
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	11	45	51	36	47	25	53	55	58
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	<0.4	1	0.6	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
TOC (mg/L)	5.3	32	N/A	22	27	16	6.2	6.6	9.2
TDS (mg/L)	210	990	1000	1100	1100	700	450	480	450
Eh (mv)	120	154	170	150	191	180	150	120	130
pH (pH units)	11.6	11.6	11.7	11.5	11.5	11.1	11.4	11.4	11.4

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.

Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

N/A Not analyzed, sample bottle broken.

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TABLE 12. RESULTS FOR SMALL COLUMN WILT TEST - SIXTH LEACHATE.

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<0.7	<0.7	<0.7	<0.6	<0.6	<0.8	<0.8	<0.8	<0.8
Aroclor-1221	<1.3	<1.3	<1.3	<1.3	<1.3	<1.5	<1.6	<1.6	<1.6
Aroclor-1232	<1.3	<1.3	<1.3	<1.3	<1.3	<1.5	<1.6	<1.6	<1.6
Aroclor-1242	<0.7	<0.7	<0.7	<0.6	<0.6	<0.8	<0.8	<0.8	<0.8
Aroclor-1248	<0.7	<0.7	<0.7	<0.6	<0.6	<0.8	<0.8	<0.8	<0.8
Aroclor-1254	<1.3	<1.3	<1.3	<1.3	<1.3	<1.5	<1.6	<1.6	<1.6
Aroclor-1260	<1.3	<1.3	<1.3	<1.3	<1.3	<1.5	<1.6	<1.6	<1.6
Metals									
Ag	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Al	0.9	0.7	2.0	1.8	1.8	2.0	1.6	1.5	2.4
As	0.041	0.036	0.028	0.005	0.008	0.005	0.003	0.003	0.003
Ba	2.3	2.7	1.3	1.1	0.45	1.1	0.80	0.66	0.33
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	470	560	270	280	220	270	140	120	95
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cu	0.03	0.04	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	0.03
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ka	64	56	53	35	33	39	50	48	51
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC (mg/L)	110	96	67	22	28	33	12	13	11
TDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Eh (mv)	143	152	119	146	138	165	140	146	141
pH (pH units)	12.1	12.1	11.7	11.2	11.4	11.0	11.7	11.9	11.6

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

TABLE 13 RESULTS FOR LARGE COLUMN WILT TEST - SEVENTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Al	2.3	2.6	2.6	1.6	2.1	1.8	2.9	3.0	1.9
As	0.016	0.020	0.18	0.004	0.003	0.003	<0.002	<0.002	<0.002
Ba	0.55	0.47	0.55	0.77	0.59	0.26	0.25	0.25	0.15
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	120	100	130	220	160	120	56	57	32
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cu	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Mg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Na	33	52	46	39	38	22	57	57	46
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	<0.4	<0.4	1.1	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
TOC (mg/L)	31	30	44	26	21	15	7.1	5.3	9.0
TDS (mg/L)	880	1000	1100	1100	860	670	480	490	540
Eh (mv)	150	151	154	150	140	180	120	123	140
pH (pH units)	11.5	11.6	11.7	11.5	11.4	11.0	11.2	11.3	11.3

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

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TABLE 14 RESULTS FOR SMALL COLUMN WILT TEST - SEVENTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals									
Ag	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Al	0.7	0.5	2.2	1.6	1.6	1.6	1.6	1.9	2.2
As	0.028	0.030	0.021	0.003	0.003	0.003	<0.002	<0.002	<0.002
Ba	2.4	2.4	0.97	0.92	0.92	0.26	0.25	0.79	0.4
Be	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ca	470	480	200	230	220	170	140	140	89
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cu	0.027	0.027	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Mg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Na	49	43	54	28	34	25	52	69	51
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	3.5	4	1.7	1.2	<0.8	<1.0	<1.0	<1.0	<1.0
TOC (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS (mg/L)	2000	2000	1400	1200	1100	910	710	760	530
Eh (mv)	181	179	110	176	140	150	112	112	115
pH (pH units)	11.9	11.9	11.8	11.5	11.6	11.4	11.7	11.6	11.5

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.
NA Not analyzed.

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TABLE 15. RESULTS FOR LARGE COLUMN WILT TEST - EIGHTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Aroclor-1221	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Aroclor-1232	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Aroclor-1242	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Aroclor-1248	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Aroclor-1254	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Aroclor-1260	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Metals									
Ag	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Al	1.9	2.3	2.7	2.0	2.0	1.9	1.6	2.7	3.1
As	0.014	0.019	0.020	0.006	0.005	0.005	0.006	0.005	0.006
Ba	0.43	0.5	0.48	0.58	0.59	0.24	0.7	0.24	0.22
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	88	110	110	160	160	110	130	54	50
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cu	<0.2	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	<0.02	<0.02
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	32	39	49	28	35	20	51	46	68
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	0.092	0.078	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	0.51	0.53	0.53	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
TOC (mg/L)	17	27	20	17	18	11	3.4	2.6	2.6
TDS (mg/L)	690	1300	990	1000	1300	720	360	400	470
Eh (mv)	180	175	185	180	185	170	125	180	175
pH (pH units)	11.3	11.2	11.4	11.1	11.2	11.1	11.1	11.2	11.4

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

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TABLE 16. RESULTS FOR SMALL COLUMN WILT TEST - EIGHTH LEACHATE

Parameter	Off-Site Area 1			Filter Cake			Filter Cake / Oily Sludge Mixture		
	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3
	mg/L			mg/L			mg/L		
PCBs									
Aroclor-1016	<1.1	<0.8	<0.8	<1.0	<0.2	<0.3	<0.2	<0.2	<0.2
Aroclor-1221	<2.2	<1.6	<1.6	<2.0	<0.4	<0.6	<0.4	<0.4	<0.4
Aroclor-1232	<2.2	<1.6	<1.6	<2.0	<0.4	<0.6	<0.4	<0.4	<0.4
Aroclor-1242	<1.1	<0.8	<0.8	<1.0	<0.2	<0.3	<0.2	<0.2	<0.2
Aroclor-1248	<1.1	<0.8	<0.8	<1.0	<0.2	<0.3	<0.2	<0.2	<0.2
Aroclor-1254	<2.2	<1.6	<1.6	<2.0	<0.4	<0.6	<0.4	<0.4	<0.4
Aroclor-1260	<2.2	<1.6	<1.6	<2.0	<0.4	<0.6	<0.4	<0.4	<0.4
Metals									
Ag	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Al	0.8	0.5	1.6	1.5	1.5	1.6	2.3	1.6	2.0
As	0.034	0.031	0.031	0.005	0.005	0.007	0.004	0.004	0.004
Ba	2.4	2.4	1.4	0.91	0.80	0.44	0.21	0.71	0.35
Be	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ca	460	450	270	230	200	180	47	120	84
Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cu	0.044	0.032	0.022	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Na	48	32	55	26	27	28	41	54	51
Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Tl	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Other Tests									
O & G (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC (mg/L)	87	73	62	16	12	16	8.5	8.5	6.3
TDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Eh (mv)	179	170	115	177	145	130	170	173	[illegible]
pH (pH units)	11.9	12.1	12.1	11.7	11.7	11.5	11.8	11.8	11.7

Note: Data preceded by the < sign indicate the detection limit for the parameter in a given sample.
Note: These data meet the data quality objectives outlined in the QAPP, unless otherwise noted.

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FIGURE 2

Aluminum Results For Off-Site Area 1

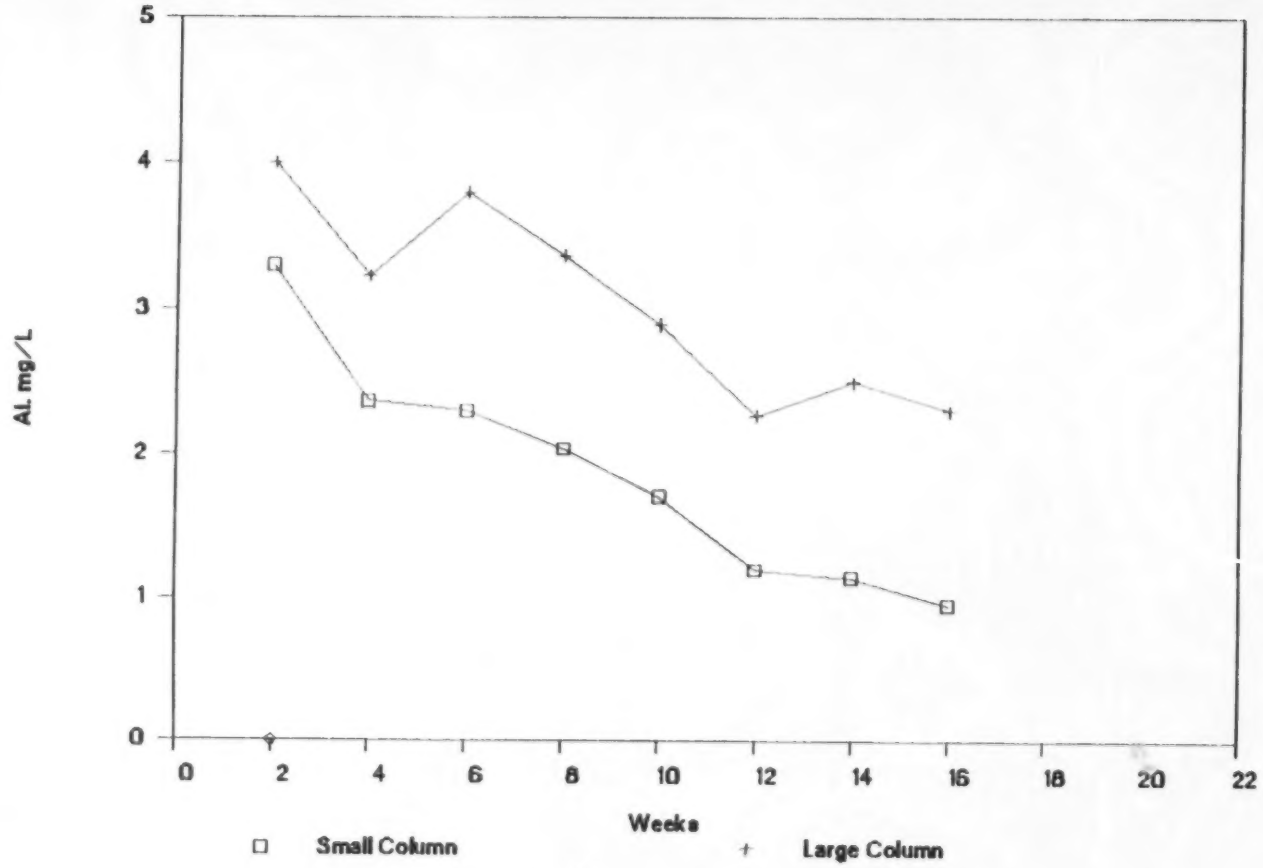

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FIGURE 3

Barium Results For Off-Site Area 1

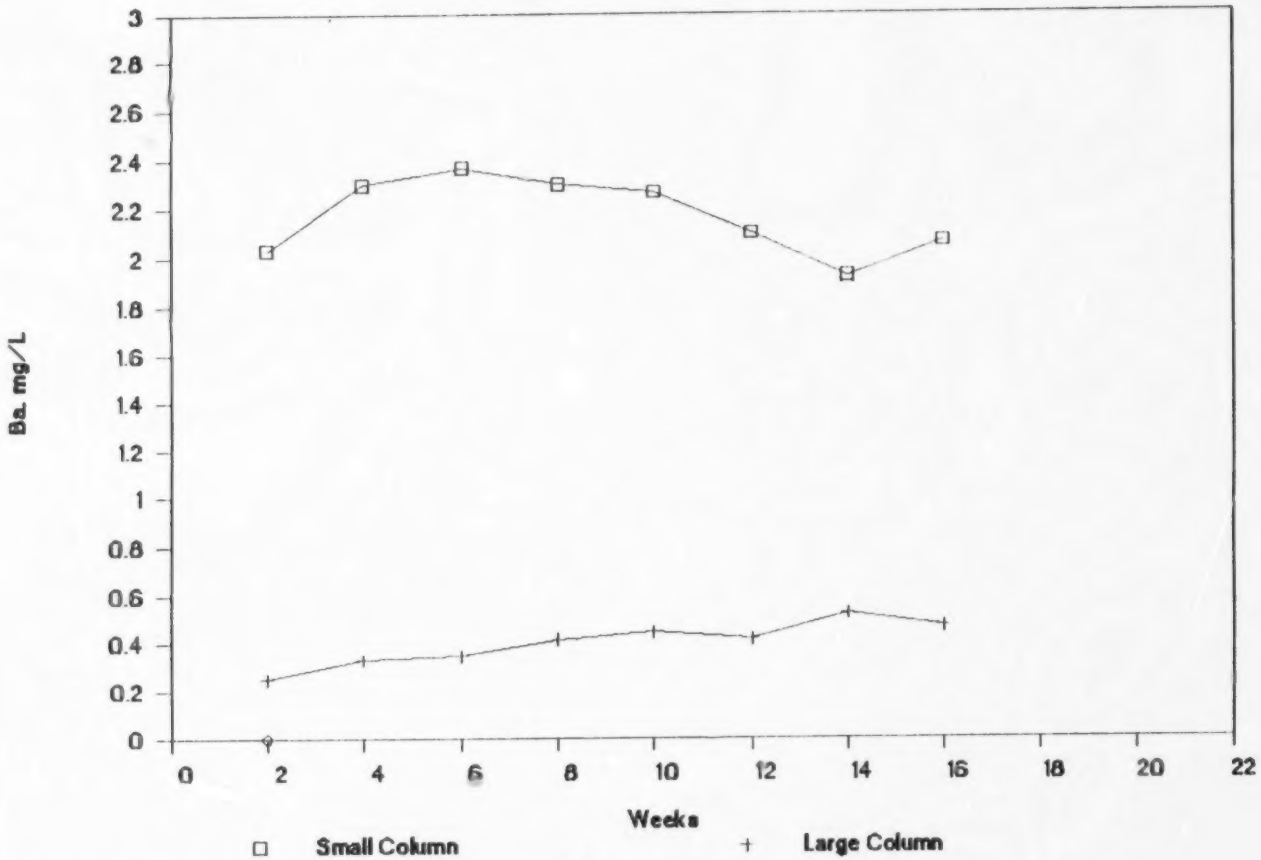

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FIGURE 4

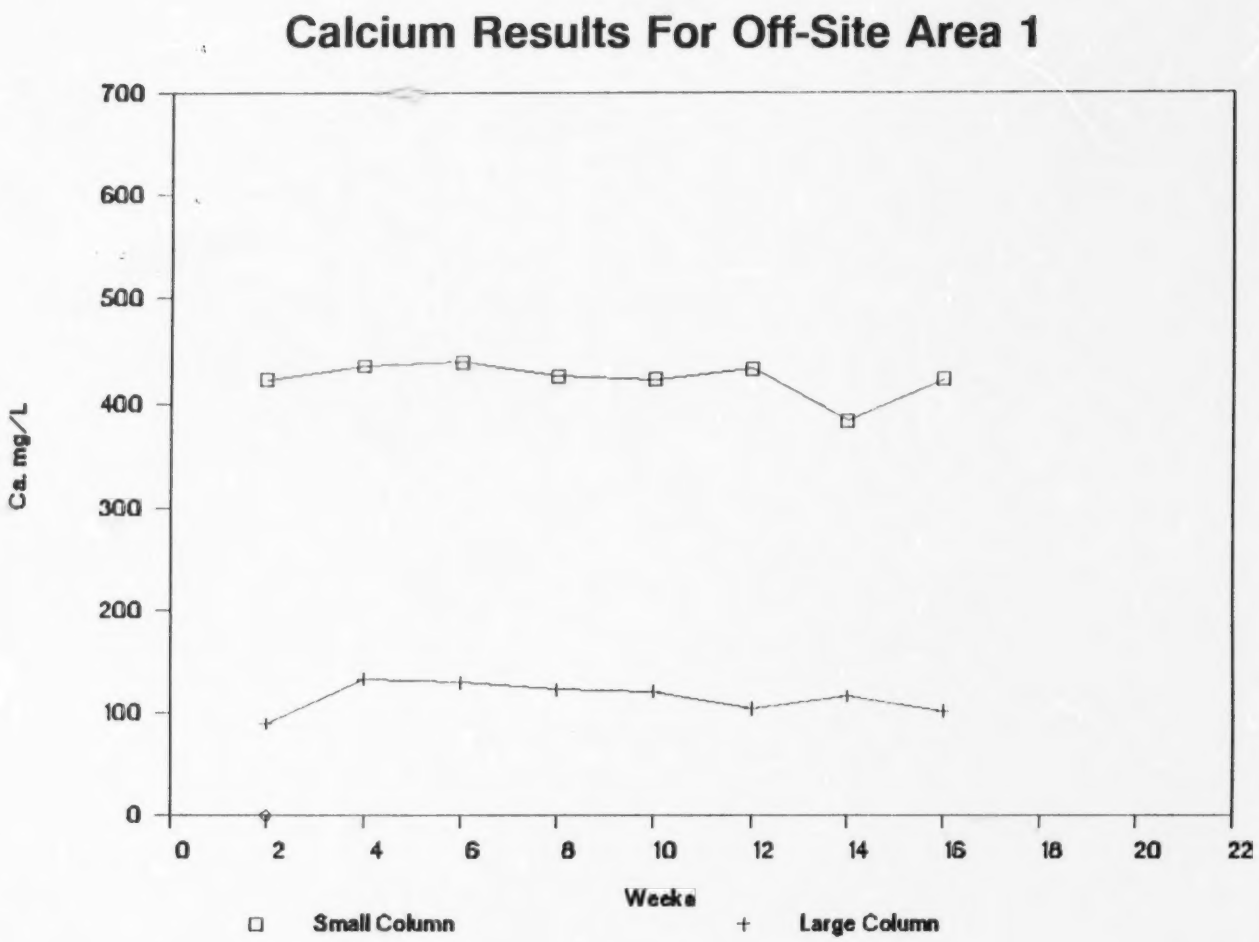
Calcium Results For Off-Site Area 1
Ca, mg/L
700
600
500
400
300
200
100
0
0
2
4
6
8
10
12
14
16
18
20
22
Weeks
Small Column
Large Column

FIGURE 5

Sodium Results For Off-Site Area 1

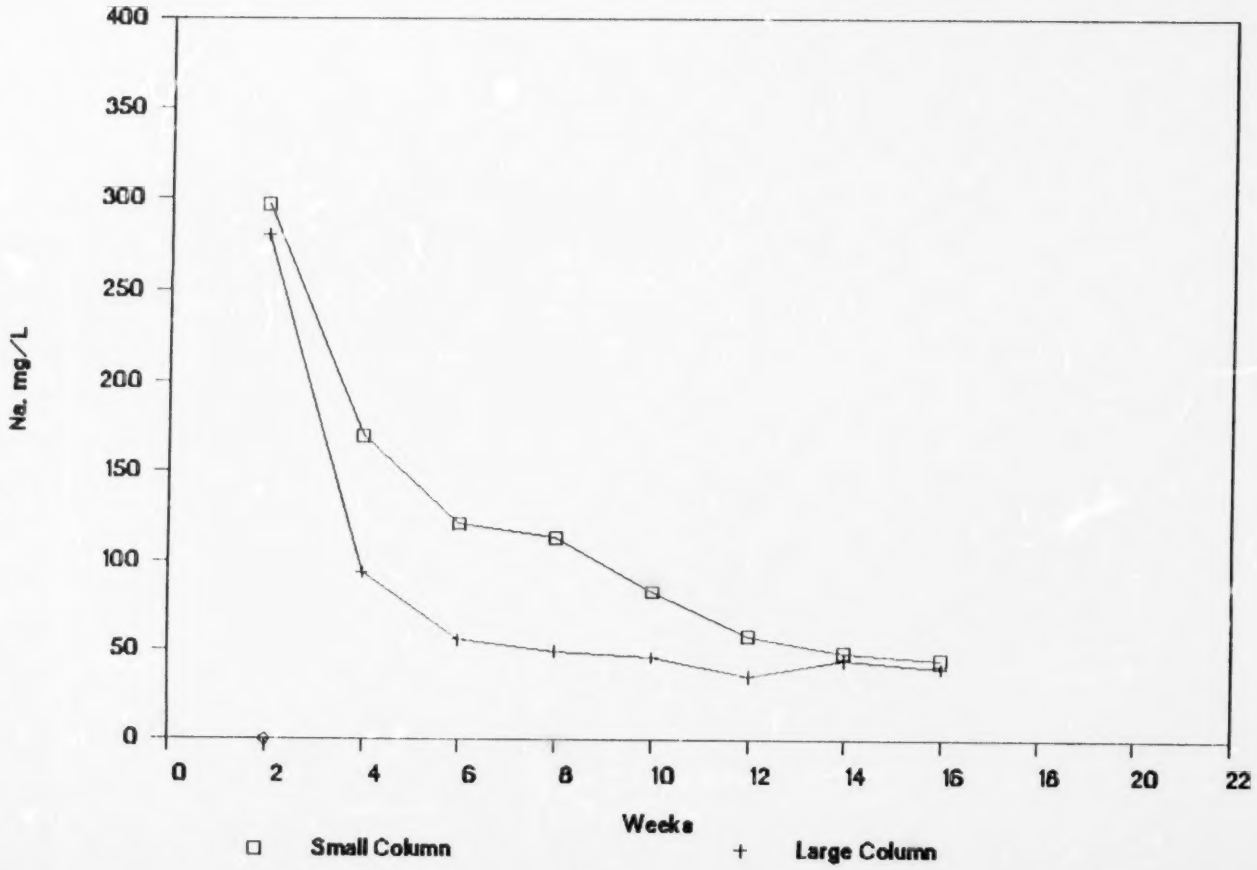

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FIGURE 6

pH Results For Off-Site Area 1

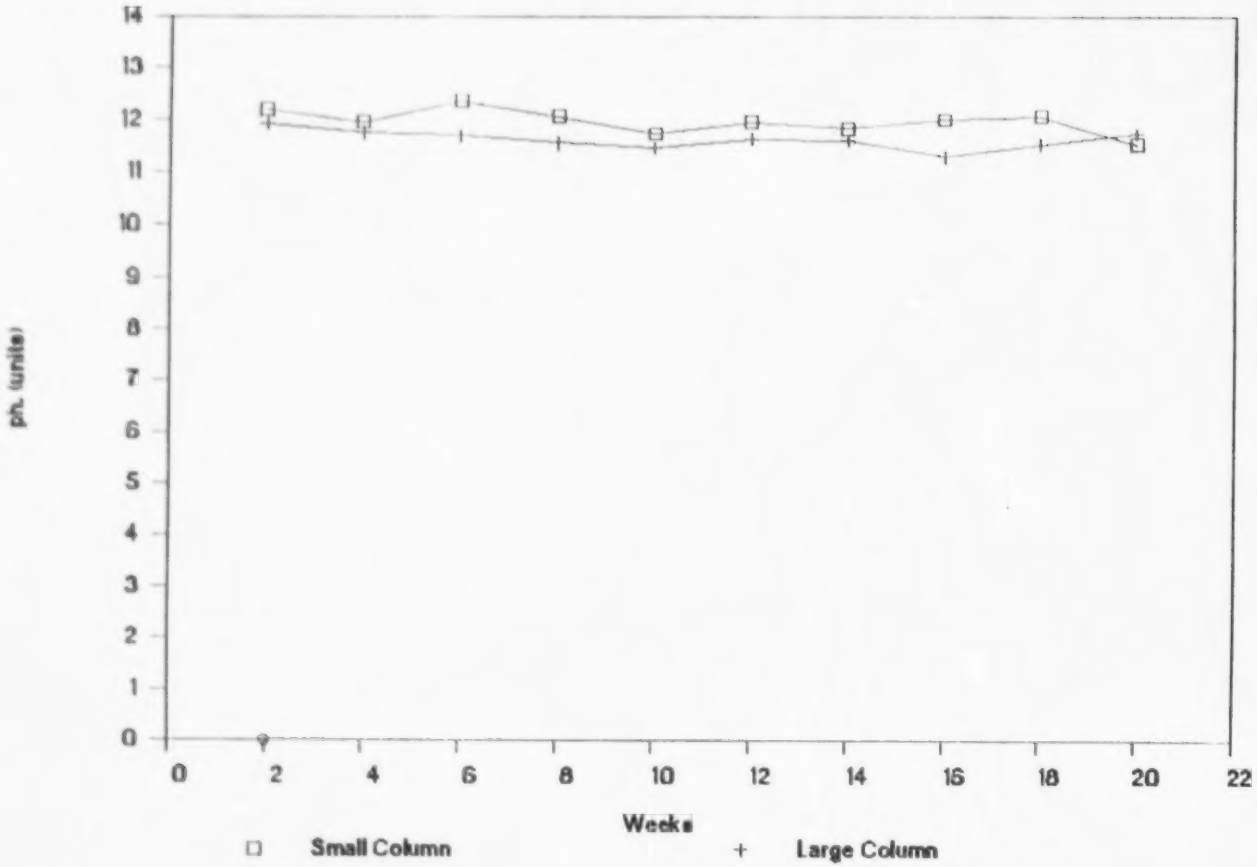

FIGURE 7

TDS Results For Off-Site Area 1

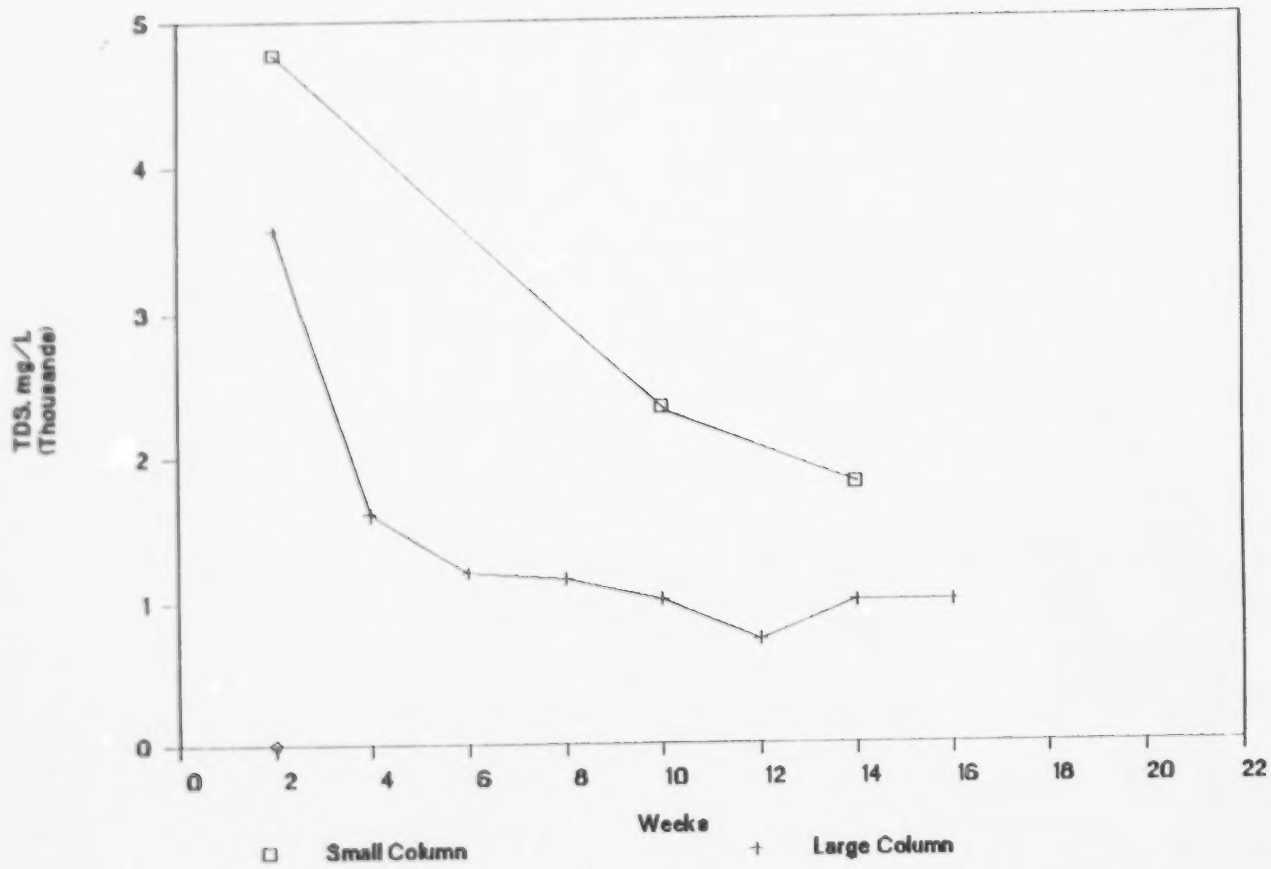

FIGURE 8

Toc Results For Off-Site Area 1

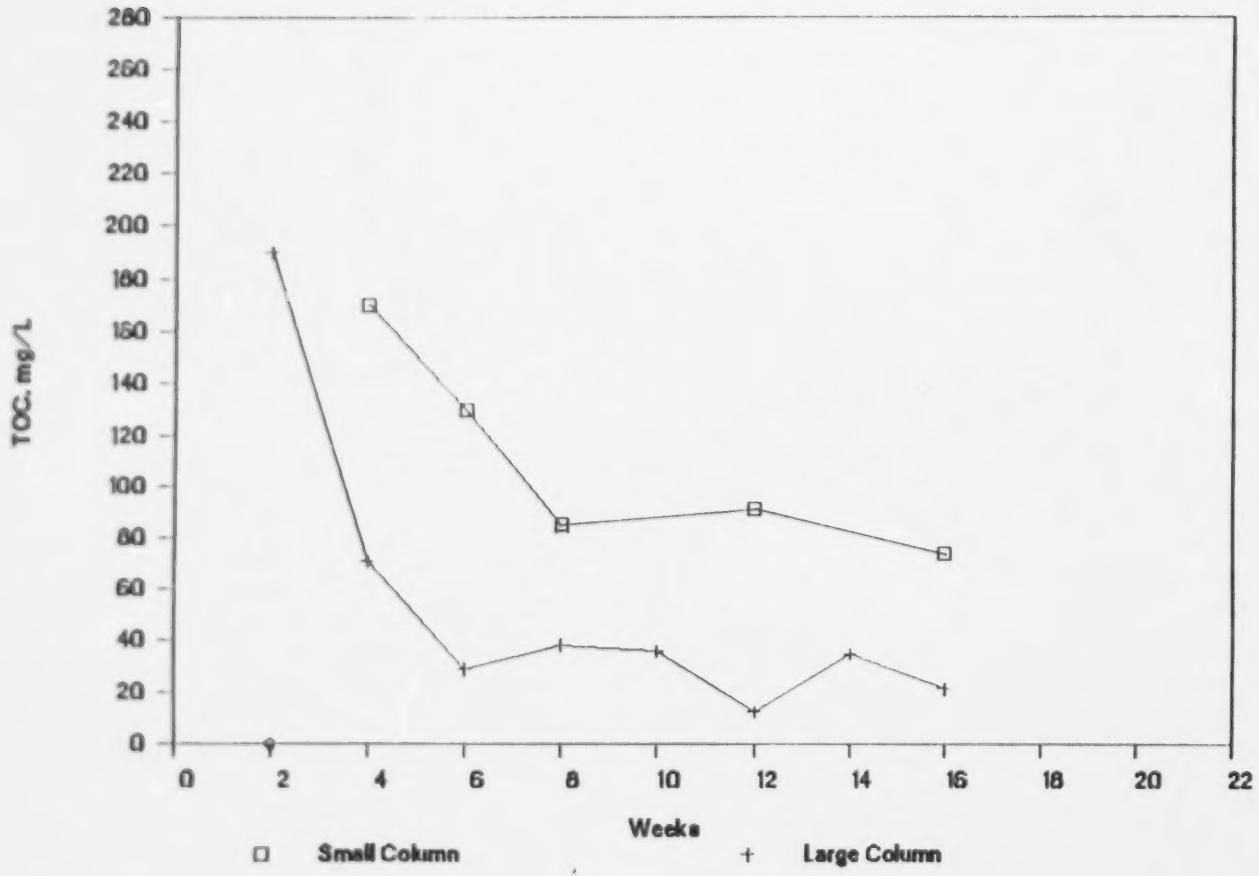

FIGURE 9

Aluminum Results For Filter Cake

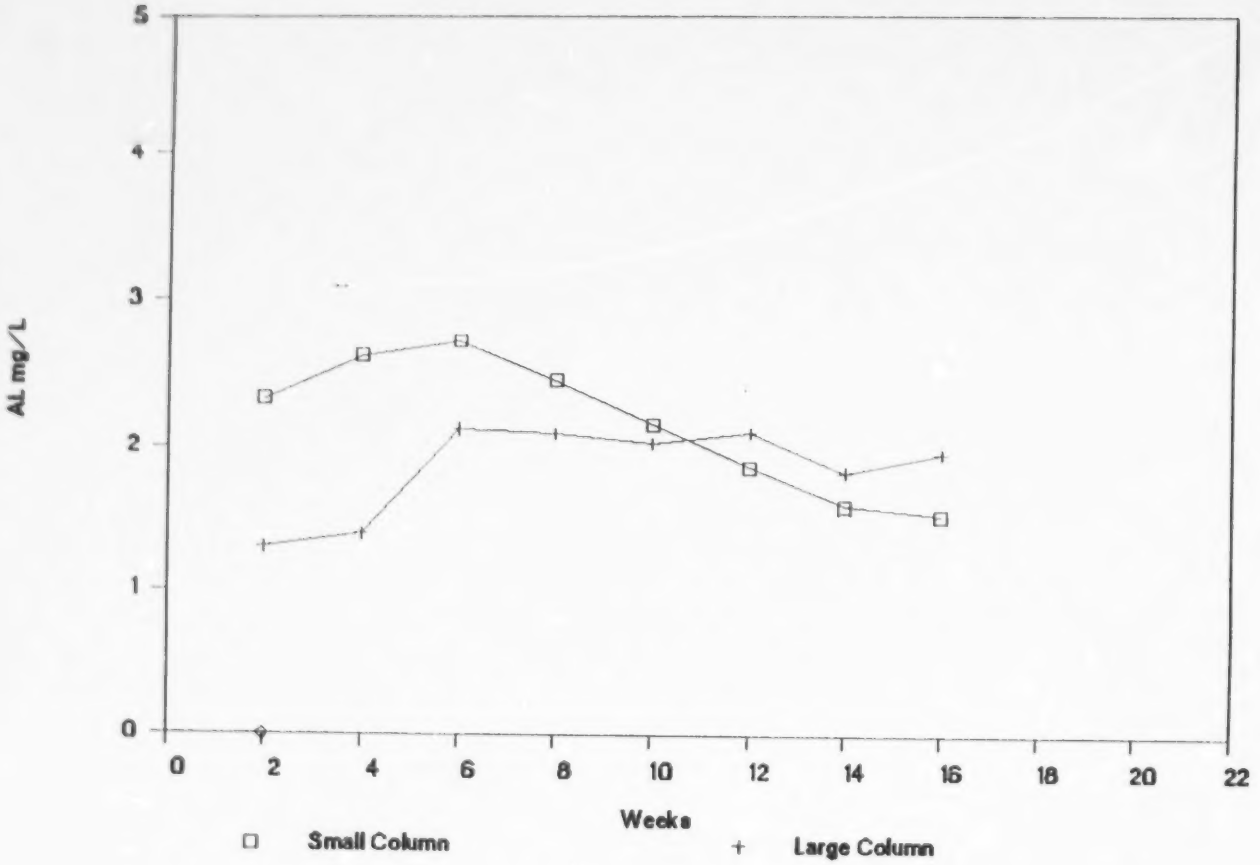

FIGURE 10

Barium Results For Filter Cake

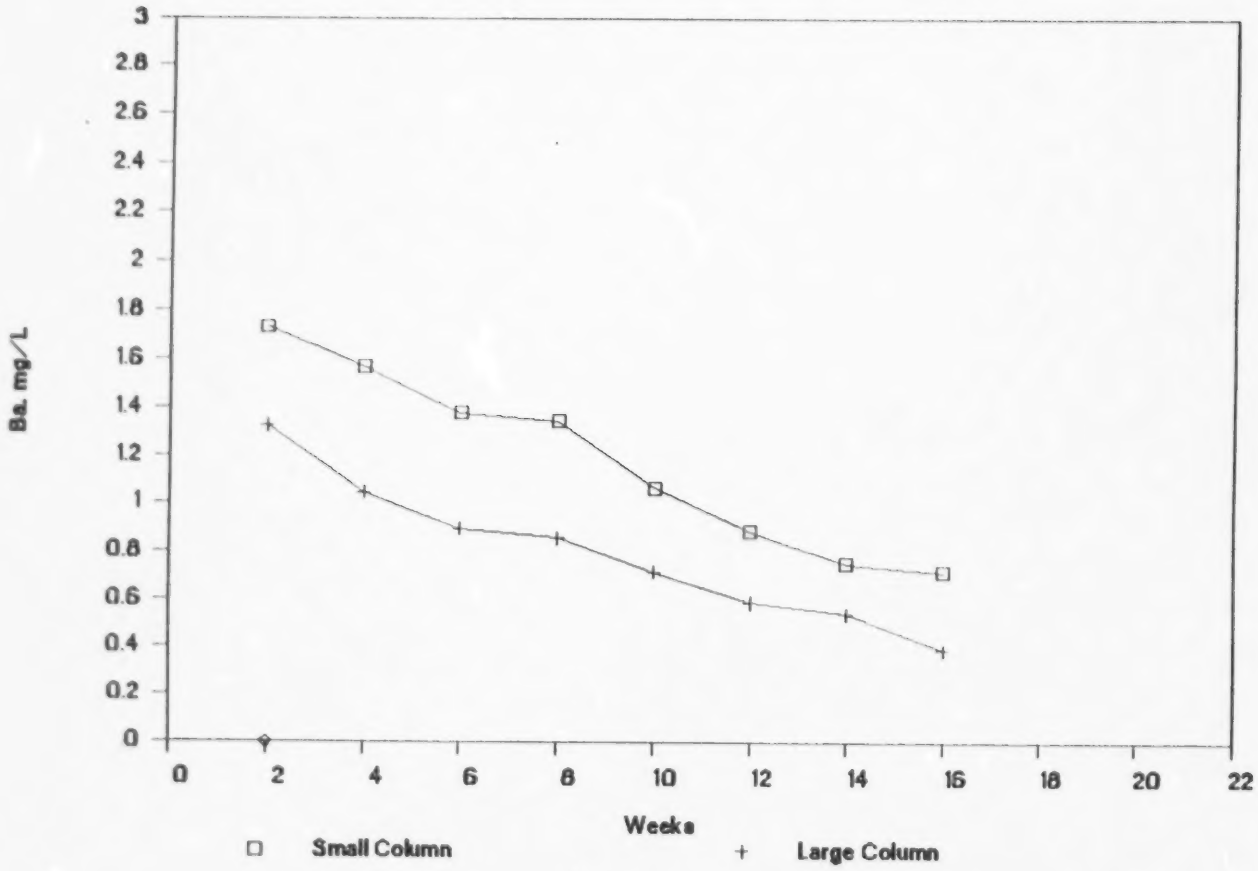

FIGURE 11

Calcium Results For Filter Cake

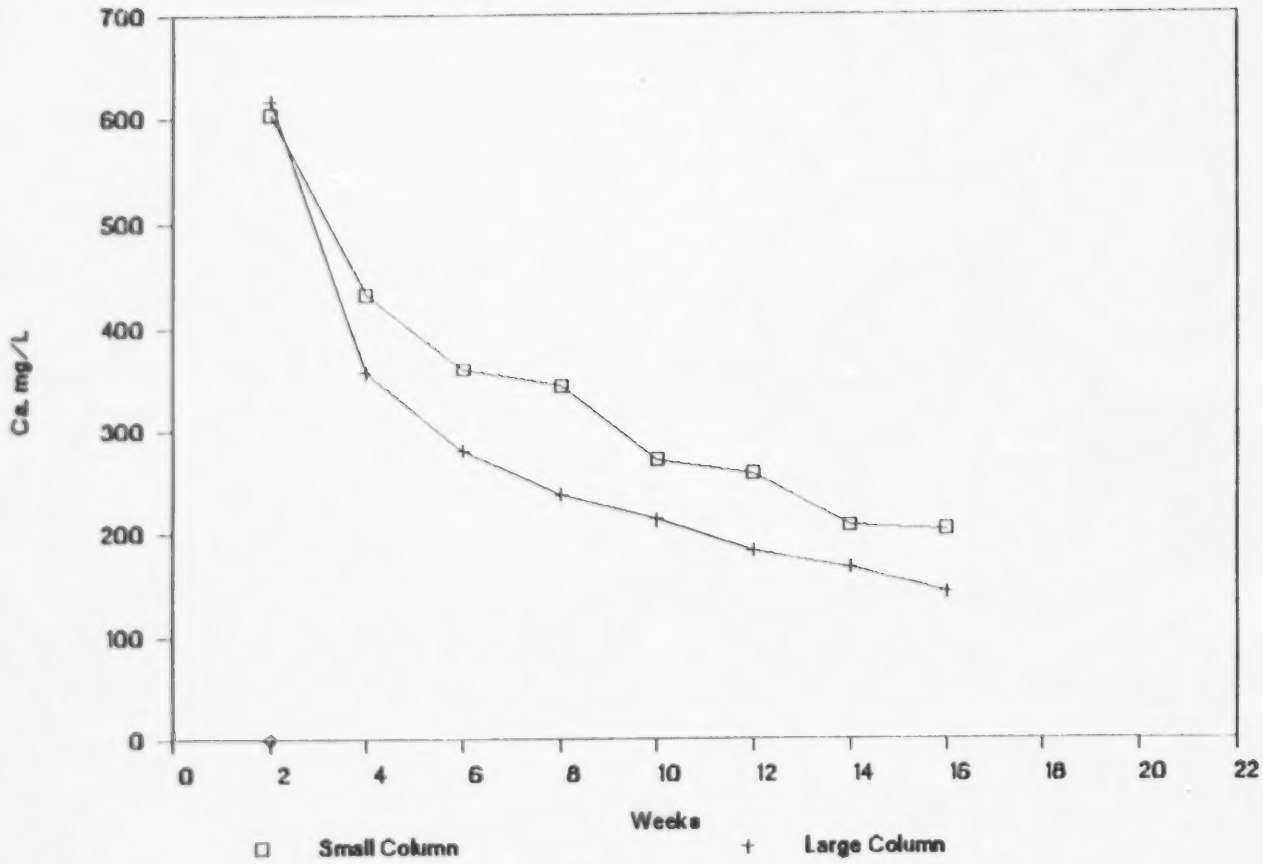

FIGURE 12

Sodium Results For Filter Cake

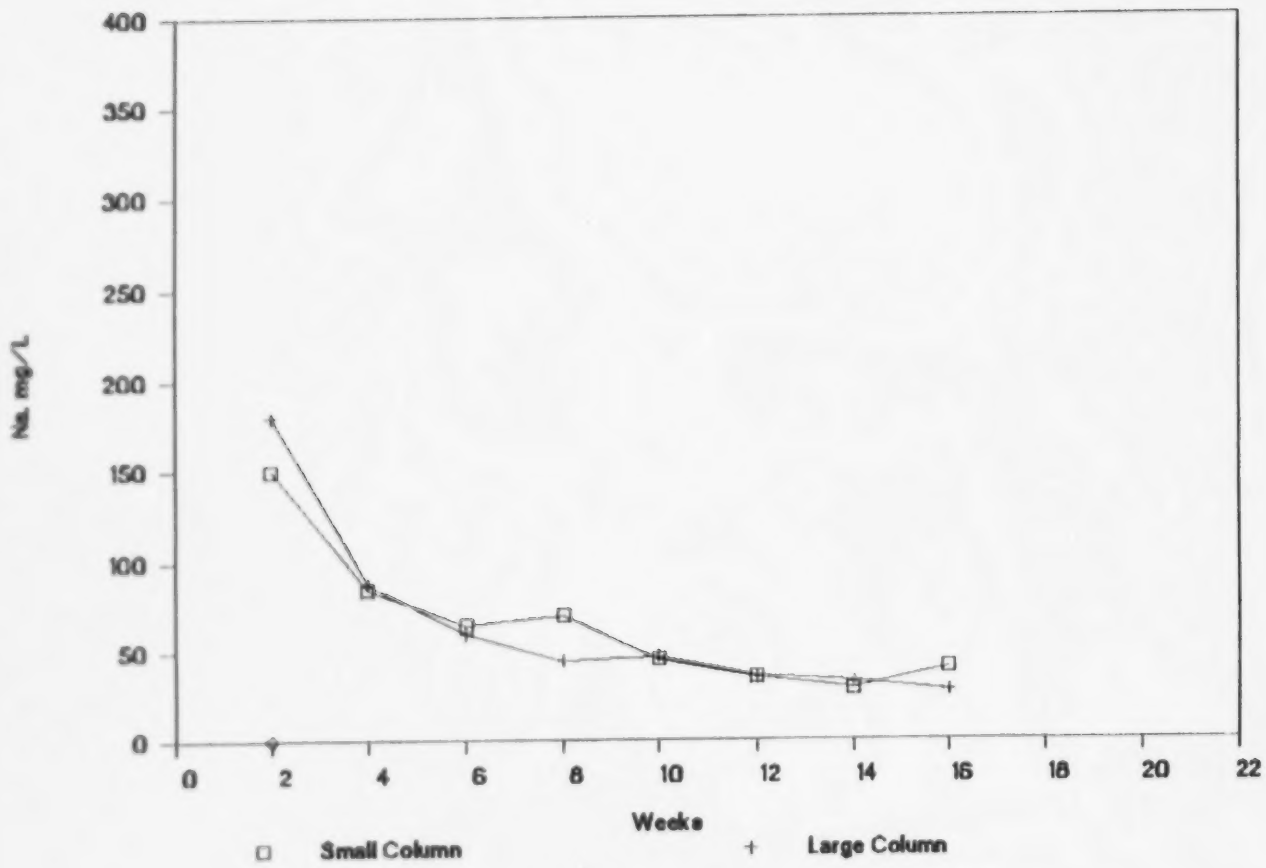

FIGURE 13

pH Results For Filter Cake

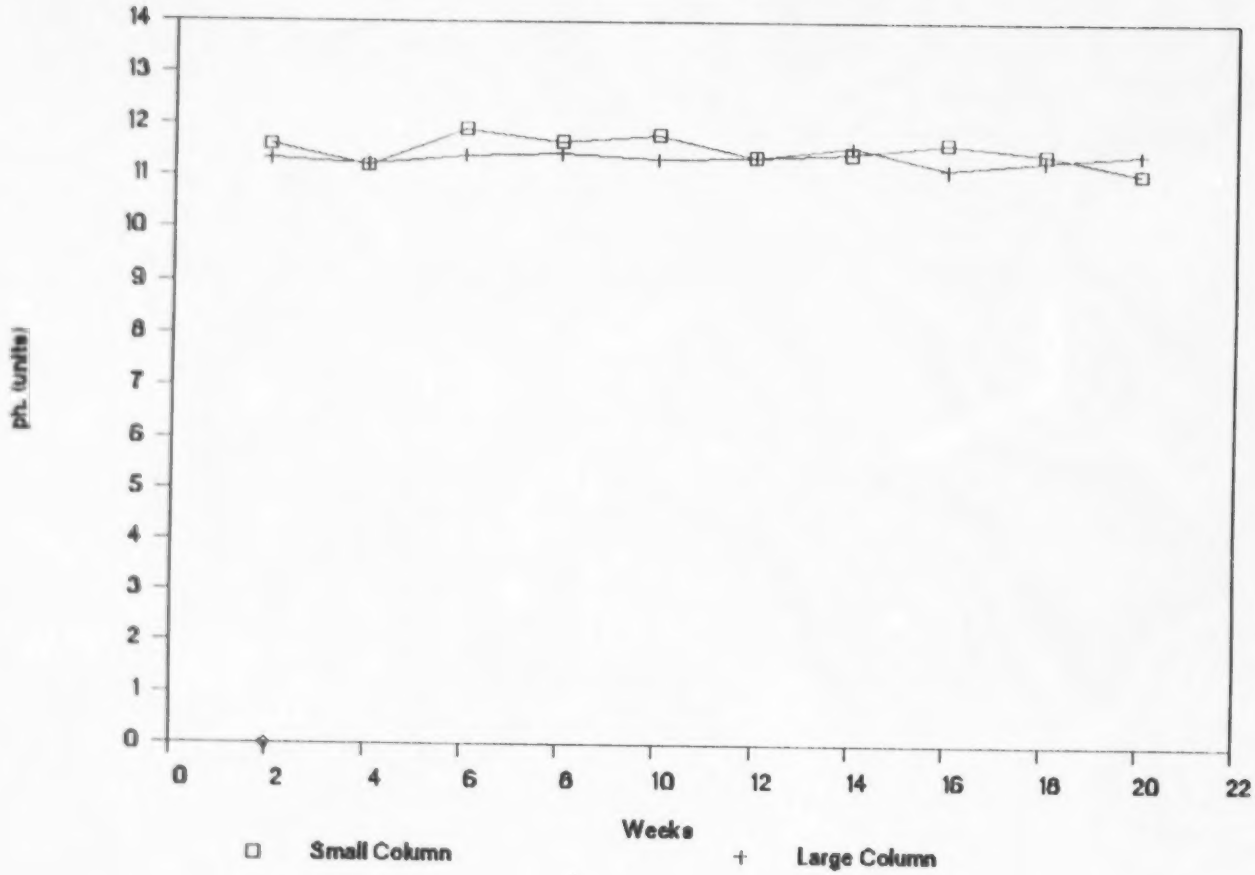

FIGURE 14

TDS Results For Filter Cake

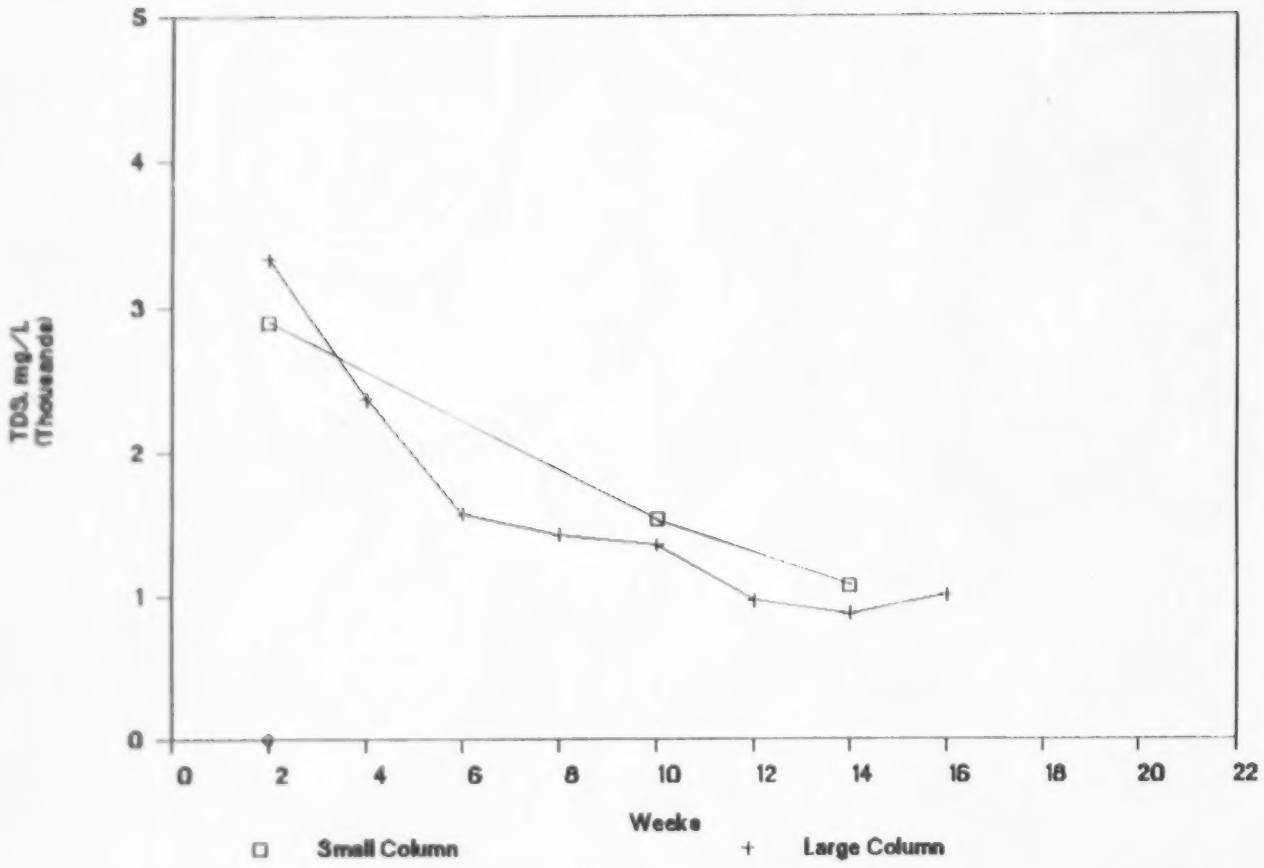

FIGURE 15

TOC Results For Filter Cake

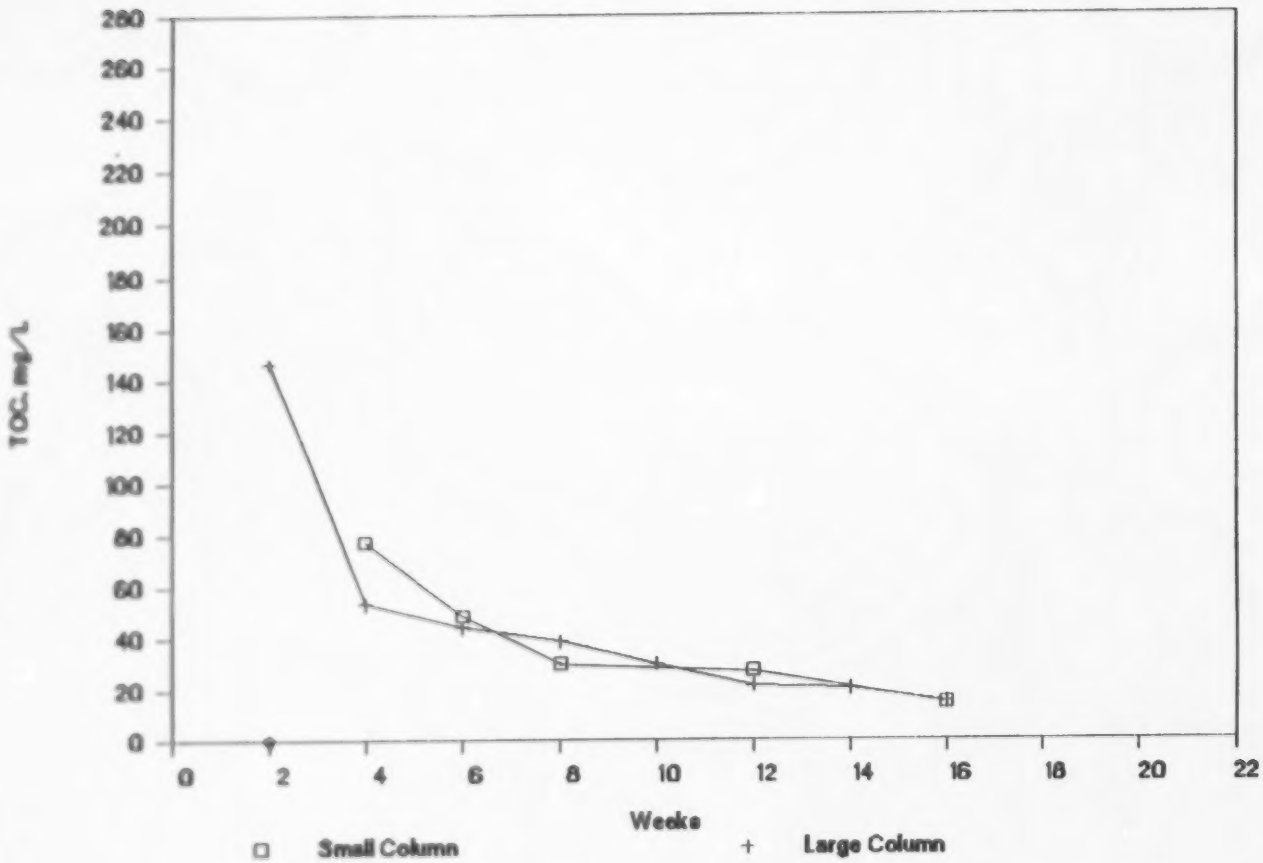

FIGURE 16

Aluminum Results For FC/OS Mixture

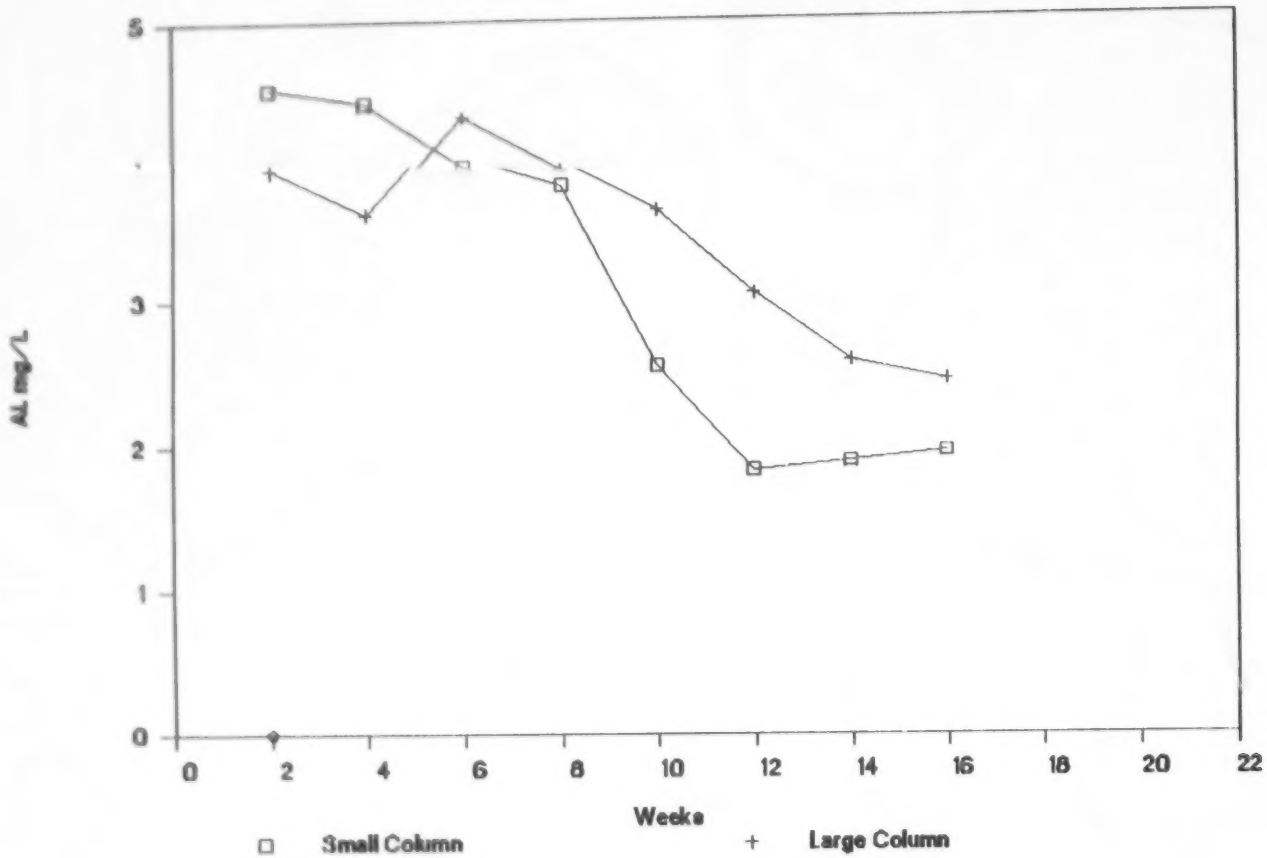

FIGURE 17

Barium Results For FC/OS Mixture

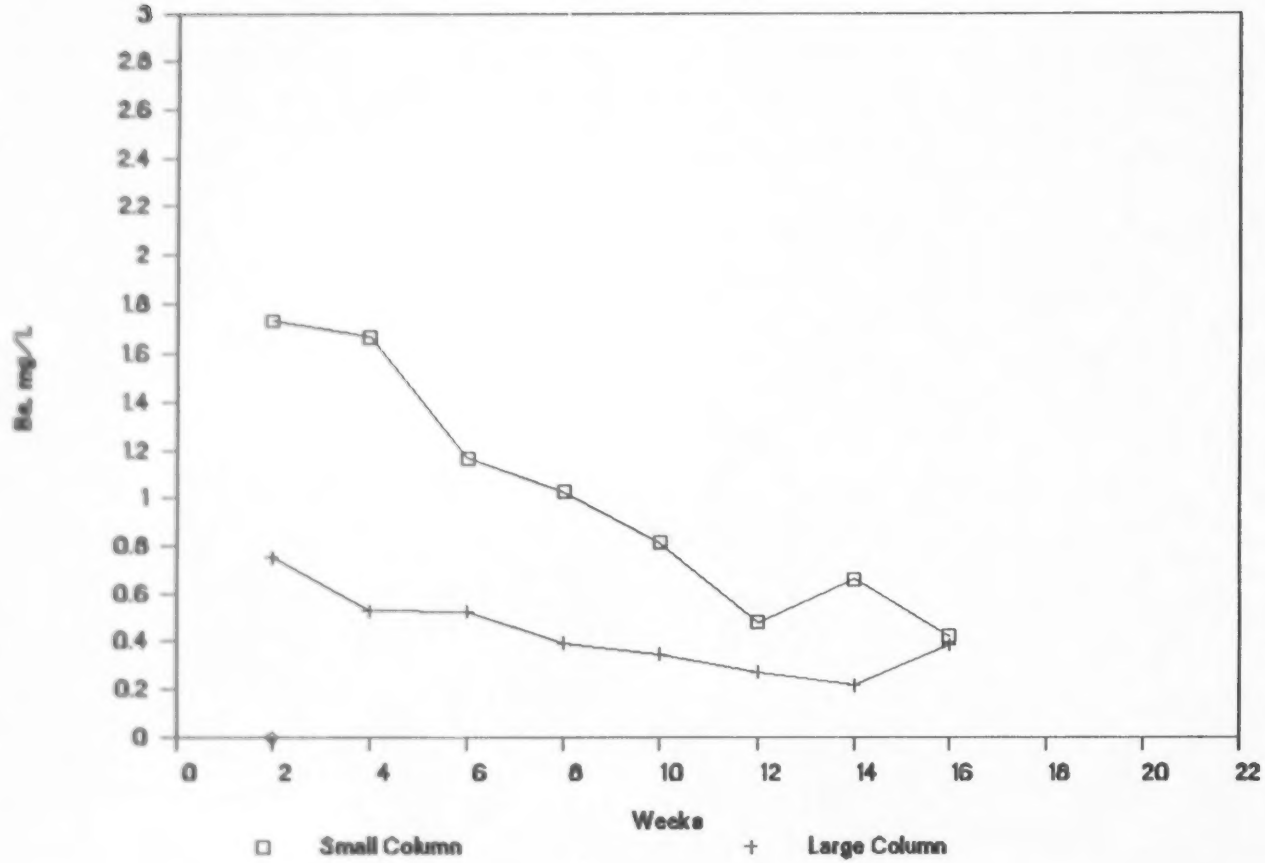

FIGURE 18

Calcium Results For FC/OS Mixture

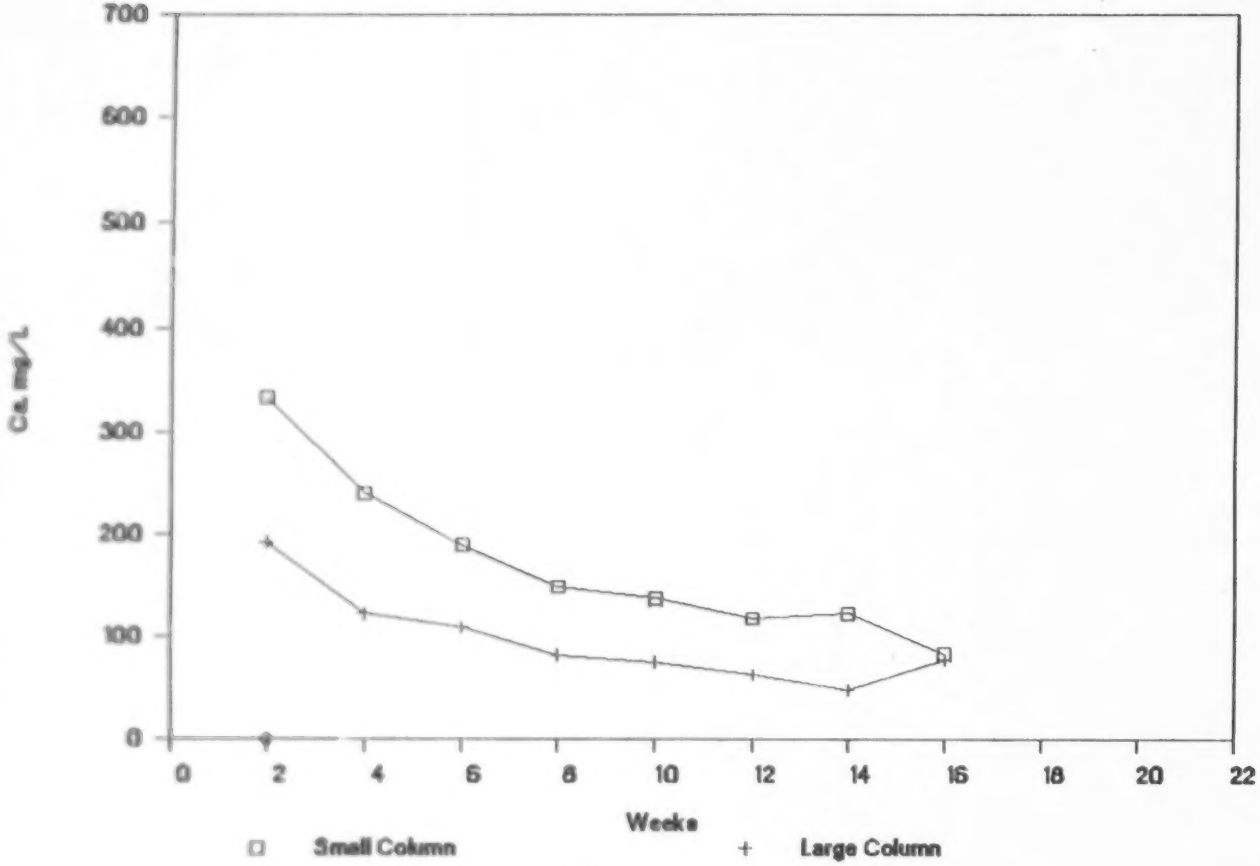

FIGURE 19

Sodium Results For FC/OS Mixture

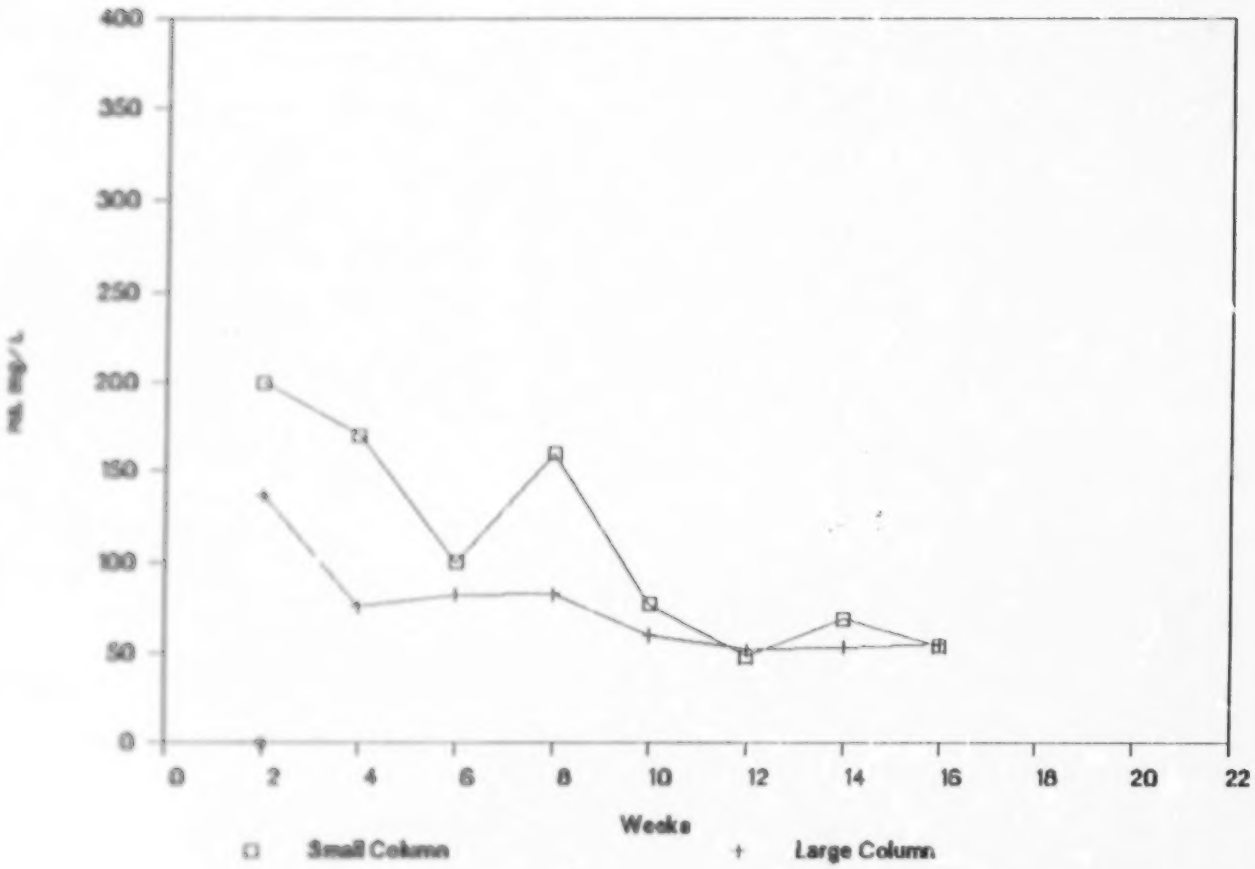

FIGURE 20

pH Results For FC/OS Mixture

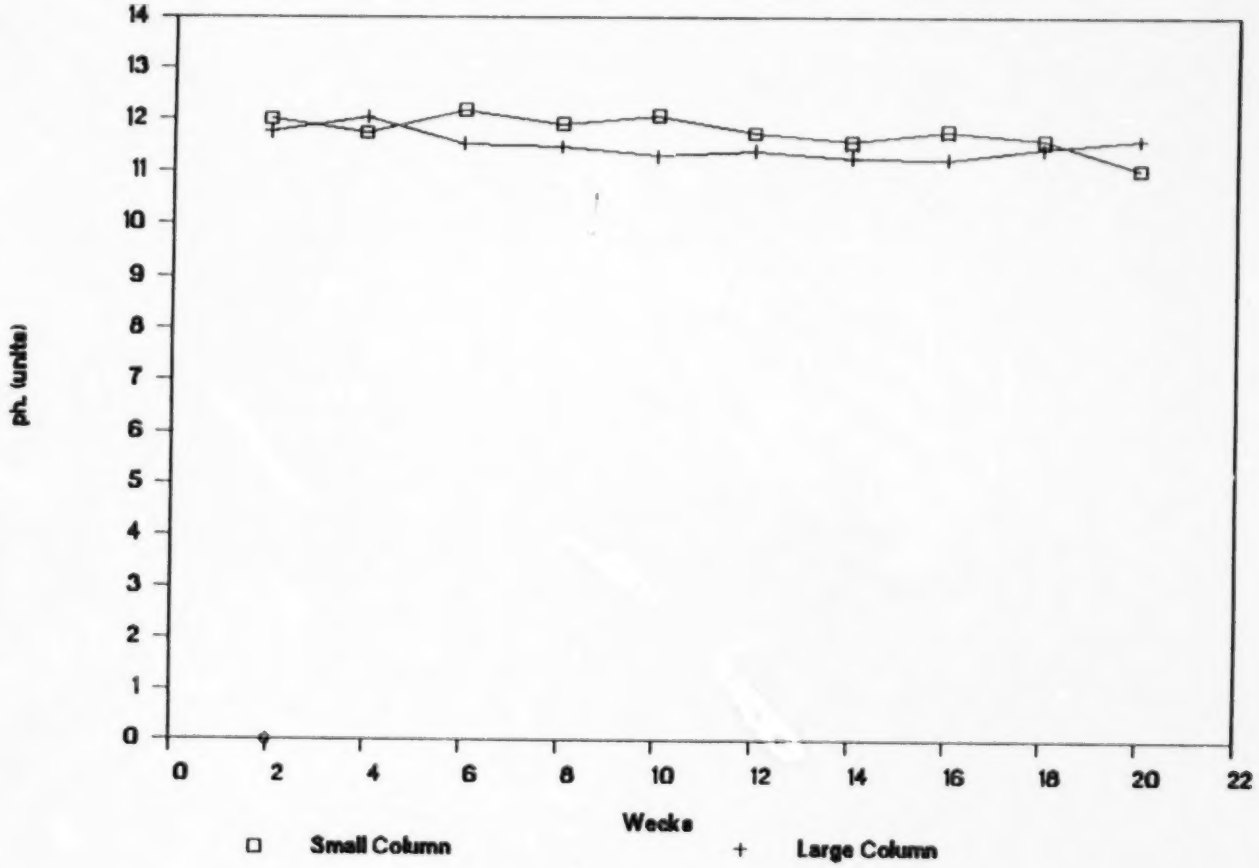

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FIGURE 21

TDS Results For FC/OS Mixture

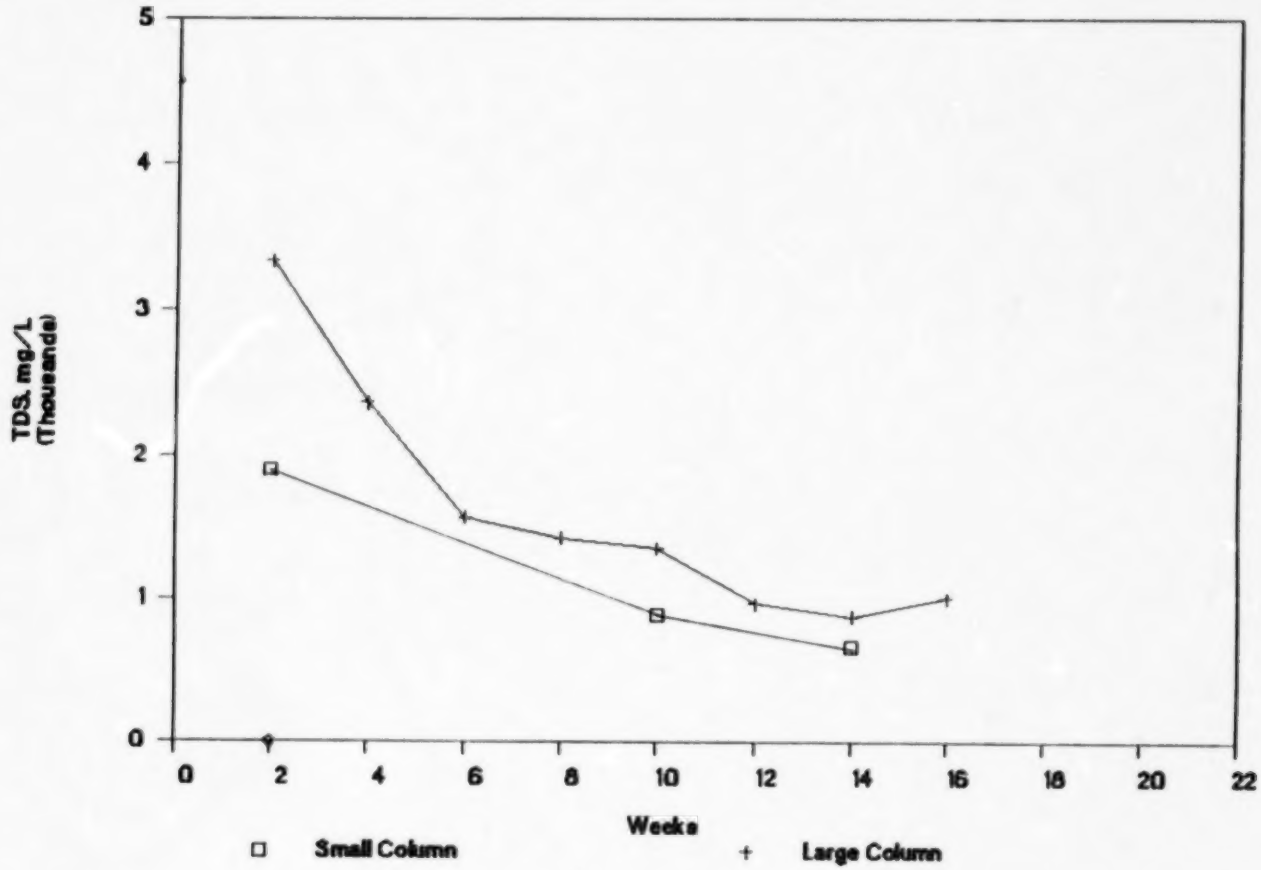
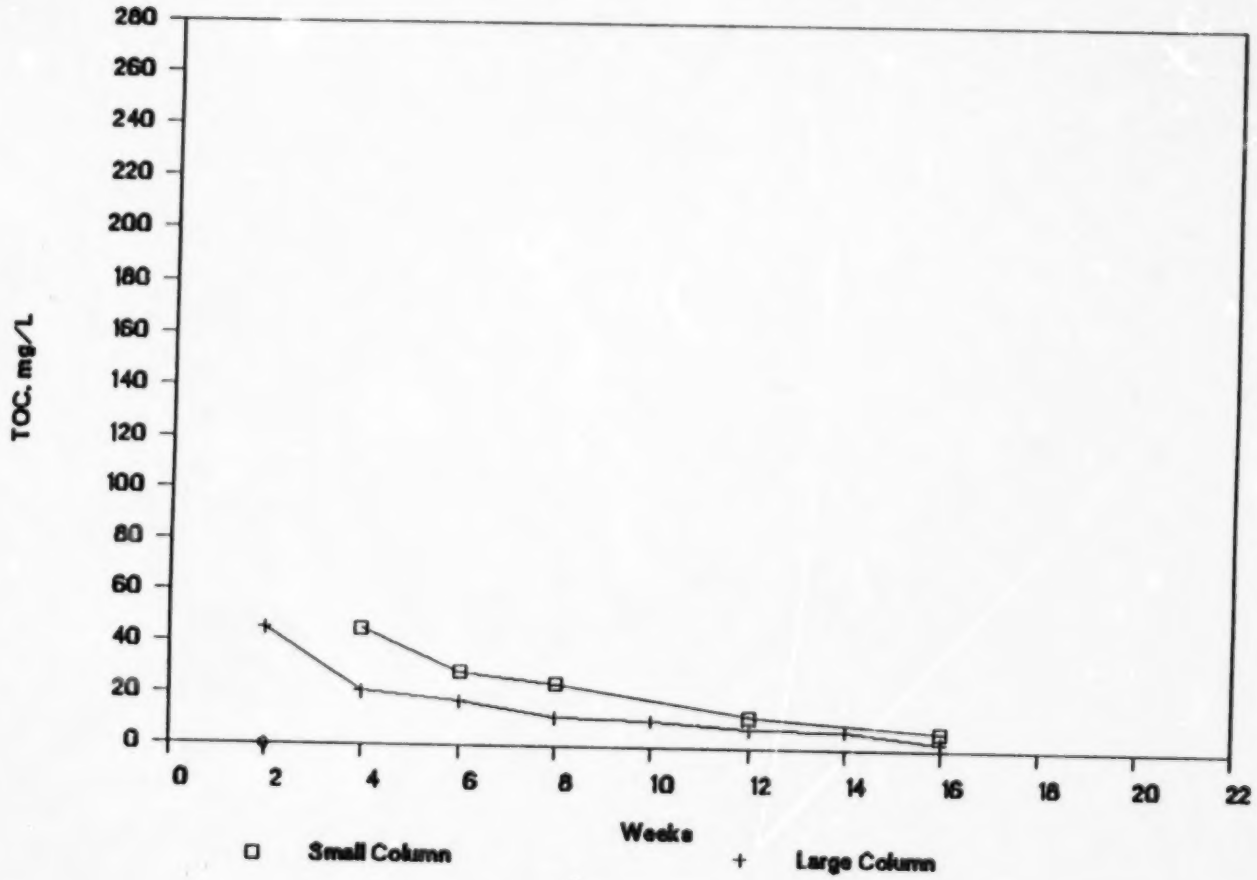


FIGURE 22

TOC Results For FC/OS Mixture